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NATIVE TREES OF MONTANA AND NORTHERN IDAHO

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION ONE

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RANGE
ON

NATIVE TREES OF MONTANA AND NORTHERN IDAHO

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE, REGION ONE
MISSOULA, MONTANA
MAY 1940

WE ALL LIKE TREES. WE REMEMBER HOW IN CHILDHOOD WE CLIMBED AMONG THEIR BRANCHES AND SWUNG FROM THEIR BOUGHS. WHO OF US HASN'T ENJOYED THEIR COOLING SHADE ON A HOT SUMMER DAY, OR THRILLED TO THE BEAUTIFUL COLORING OF THE LEAVES IN THE FALL? IS ANYTHING MORE BEAUTIFUL THAN EVERGREENS WHITE LADEN IN WINTER WITH NEW FALLEN SNOW?

BUT TREES ARE IMPORTANT TO US IN OTHER WAYS: TO MANY OF US TREES ARE A LIVELIHOOD. TO THE FORESTER AT WORK PLANTING SMALL TREES ON A BARREN SLOPE, TO THE LUMBERJACK CUTTING MONARCHS OF THE FOREST, TO THE SAWYER DRIVING HIS SAW THROUGH GREAT LOGS IN THE MILL, TO THE LUMBER DEALER SELLING BUILDING MATERIALS TO CONSTRUCT THE SHINGLED ROOF OVER OUR HEADS — TO ALL THESE, TREES ARE THE VERY MEANS OF LIVING.

THOUGH WE ALL ENJOY TREES, MANY OF US TAKE THEM FOR GRANTED, NEVER BOTHERING TO LEARN ONE FROM ANOTHER, NEVER STOPPING TO DISCOVER THE INDIVIDUALITY POSSESSED BY EACH SPECIES. IT IS ONLY WHEN A BEAUTIFUL FOREST IS BURNED BY A FOREST FIRE, LEAVING BLACKENED GHOSTS OF TREES, OR WHEN A FAVORITE SHADE TREE IS KILLED BY INSECTS OR DISEASE, OR, PERHAPS WHEN A CHERISHED PICNIC GROVE IS LAID LOW BY THE AX, THAT MANY PEOPLE REALLY BECOME AWARE OF THE TREES THEY ONCE KNEW AND ENJOYED.

THIS LITTLE BOOKLET IS INTENDED TO HELP INTERESTED PERSONS BECOME BETTER ACQUAINTED WITH THE NATIVE TREES OF MONTANA AND NORTHERN IDAHO. THOUGH IT IS NOT COMPLETE, THE SPECIES COMMONLY MET WITH ARE INCLUDED. IT IS DIVIDED INTO TWO SECTIONS; SOFTWOODS OR EVERGREENS, BEGINNING ON THE NEXT PAGE AND INCLUDING DESCRIPTIONS FOR 17 SPECIES, AND HARDWOODS OR BROADLEAF TREES, BEGINNING ON PAGE 21 AND INCLUDING 19 SPECIES. EACH SECTION CONTAINS AN INTRODUCTION EXPLAINING THE CHARACTERISTICS OF THE GROUP AND A KEY FOR SEPARATING OUT THE SPECIES OF THE GROUP. TECHNICAL TERMS ARE LARGELY AVOIDED TO SIMPLIFY DESCRIPTIONS.

IT IS THE SINCERE HOPE THAT THE BOOKLET WILL LEAD TO A GREATER APPRECIATION OF OUR NATIVE TREES AND RESULT IN GREATER PROTECTION OF OUR FORESTS AGAINST FIRE AND OTHER ENEMIES.

LIBRARY COPY
ROCKY MT. FOREST & RANGE
EXPERIMENT STATION

SOFTWOODS

TREES, SUCH AS THE PINES, FIRS, CEDARS, AND SPRUCES, ARE COMMONLY GROUPED TOGETHER AND KNOWN AS SOFTWOODS, CONIFERS, EVERGREENS, OR NEEDLE-BEARING TREES. THESE NAMES DESCRIBE THE GROUP FAIRLY WELL, BUT WITHIN THE GROUP ARE EXCEPTIONS TO EACH NAME. FOR EXAMPLE, THOUGH MOST SOFTWOODS DO HAVE SOFT WOOD, A FEW SUCH AS WESTERN LARCH AND DOUGLAS-FIR HAVE HARDER WOOD THAN COTTONWOOD WHICH IS IN THE HARDWOOD GROUP. AGAIN, THOUGH MOST OF THE SOFTWOODS ARE CONE-BEARING, SOME SPECIES SUCH AS PACIFIC YEW AND THE JUNIPERS HAVE A BERRY-LIKE FRUIT. THE NAME, EVERGREEN, FITS WELL, AS ALL SPECIES OF THE GROUP IN OUR REGION, EXCEPT THE LARCHES, DO HOLD THEIR LEAVES OVER WINTER. FINALLY, MOST SOFTWOODS HAVE THE NEEDLE-LIKE LEAVES FOR WHICH THE PINES ARE SO WELL KNOWN. HOWEVER, EVEN THIS NAME HAS EXCEPTIONS; WESTERN REDCEDAR AND ROCKY MOUNTAIN JUNIPER HAVE SCALE-LIKE LEAVES.

USE OF KEYS

THE KEYS ARE A SCHEME FOR IDENTIFYING UNKNOWN TREES. THEY ARE BRIEF DESCRIPTIONS OF EACH SPECIES AND INCLUDE OUTSTANDING AND DISTINGUISHING CHARACTERISTICS. TWO ALTERNATIVES ARE ALWAYS PRESENTED; EITHER A CHARACTERISTIC IS OR IS NOT PRESENT AND THESE ARE THE ONLY CHOICES POSSIBLE FOR THE TREES INCLUDED. THE ALTERNATIVES ARE FOLLOWED FROM THE A AND AA CLASSIFICATIONS DOWN TO THE TREE SOUGHT.

TO GAIN AN UNDERSTANDING OF WHAT KEYS ARE, HOW THEY ARE MADE, AND HOW THEY ARE USED, LET US TAKE AN EXAMPLE. SUPPOSE YOU WISH TO DESCRIBE FIVE OF YOUR FRIENDS SO THAT ANOTHER PERSON MEETING ANY ONE OF THE FIVE WILL KNOW HIM ON SIGHT. BILL HAS BLACK HAIR AND IS TALL. JIM ALSO HAS BLACK HAIR BUT IS SHORT. PETE RESEMBLES JIM IN THESE RESPECTS BUT PETE HAS BLUE EYES WHILE JIM'S ARE BROWN. TWO OTHER OF YOUR FIVE FRIENDS HAVE BLOND HAIR, BUT ONE, HENRY, IS FAT WHILE THE OTHER, JACK, IS THIN. FOR SIMPLICITY THESE DESCRIPTIONS CAN BE ORGANIZED IN KEY FORM AS FOLLOWS:

KEY TO FRIENDS

A. BLACK HAIR
  B. TALL. . . . . BILL
  BB. SHORT
    C. BROWN EYES . . . . . JIM
    CC. BLUE EYES . . . . . PETE

AA. BLOND HAIR
  B. FAT . . . . . HENRY
  BB. THIN . . . . . JACK

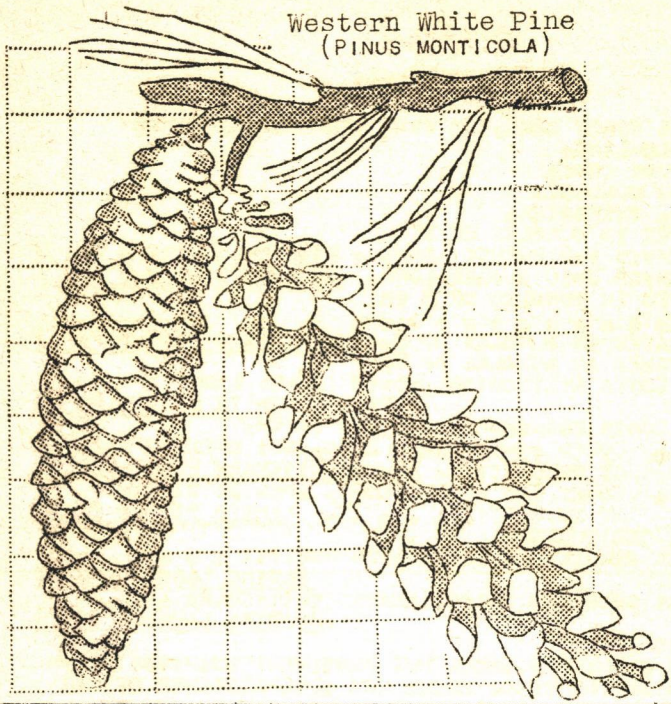
THE TREE KEYS ARE MADE UP IN MUCH THE SAME MANNER. WE SEE, THEN, THAT THEY ARE SIMPLY A SYSTEMATIC ARRANGEMENT OF DISTINGUISHING CHARACTERISTICS.

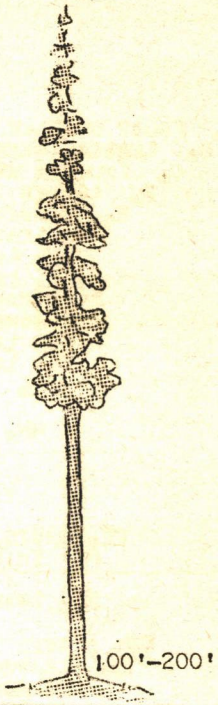
SOFTWOODS

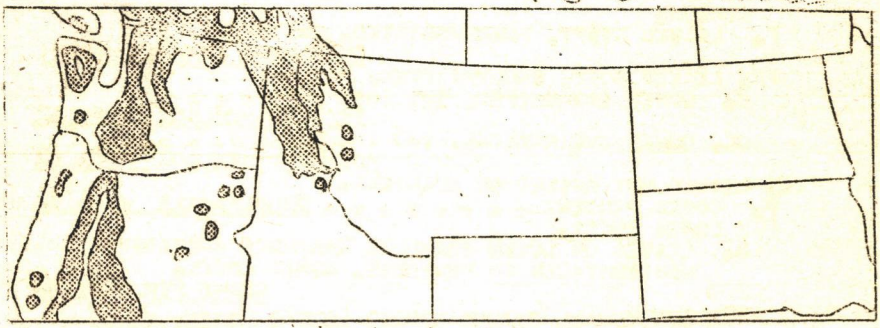
KEY TO SPECIES

A. FRUIT USUALLY A WOODY CONE, IN SOME BERRY-LIKE, BLUE.
  B. LEAVES, NEEDLE-LIKE.
    C. FRUIT A WOODY CONE.
      D. LEAVES IN BUNDLES.
        E. LEAVES, EVERGREEN.
          F. LEAVES IN BUNDLES OF 2's.
            G. LEAVES 1-3 INCHES LONG. . LODGEPOLE PINE - P. 8
            GG. LEAVES 3-10 INCHES LONG. PONDEROSA PINE - P. 7
          FF. LEAVES IN BUNDLES OF 3 OR MORE. . . . . .
            G. LEAVES IN BUNDLES OF 3. . PONDEROSA PINE - P. 7
            GG. LEAVES IN BUNDLES OF 5.
              H. CONES CYLINDRICAL, 6-10 INCHES LONG WESTERN WHITE PINE - P. 4
              HH. CONES EGG-SHAPED, SCALES THICK.
                I. CONES 1½-3 INCHES LONG, NOT OPENING WIDELY AT MATURITY. . . . . WHITEBARK PINE - P. 5
                II. CONES 3-6 INCHES LONG, OPENING WIDELY AT MATURITY. . . . . LIMBER PINE - P. 6
        EE. LEAVES, DECIDUOUS.
          F. TWIGS DENSELY HAIRY, LEAVES 4-SIDED . . . ALPINE LARCH - P. 10
          FF. TWIGS SPARSELY HAIRY, LEAVES TRIANGULAR . WESTERN LARCH - P. 9
      DD. LEAVES SOLITARY.
        E. LEAVES RAISED ON SMALL BUT PROMINENT CUSHIONS WHICH REMAIN ON THE TWIGS AFTER THE DISAPPEARANCE OF THE LEAVES.
          F. LEAVES STIFF, SHARP-POINTED, 4-SIDED. . . ENGELMANN SPRUCE - P. 11
          FF. LEAVES SOFT, BLUNT-TIPPED, FLAT.
            G. CONES EGG-SHAPED, ½-1 INCH LONG . . . . WESTERN HEMLOCK - P. 12
            GG. CONES CYLINDRICAL, 1-3 INCHES LONG. . . MOUNTAIN HEMLOCK - P. 13
        EE. LEAVES NOT RAISED ON CUSHIONS.
          F. CONES PENDENT . . . . . DOUGLAS-FIR - P. 14
          FF. CONES ERECT.
            G. LEAVES ON LOWER BRANCHES 2-RANKED SPREADING HORIZONTALLY ON BRANCHES, CONES GREEN. GRAND FIR - P. 15
            GG. LEAVES ALL TURNED UPWARD LIKE A BRUSH, CONES PURPLE. . . . . ALPINE FIR - P. 16
    CC. FRUIT BERRY-LIKE, BLUE. . . . . COMMON JUNIPER - P. 19
  BB. LEAVES SCALE-LIKE.
    C. FRUIT A WOODY CONE. . . . . WESTERN REDCEDAR - P. 17
    CC. FRUIT BERRY-LIKE, BLUE. . ROCKY MOUNTAIN JUNIPER - P. 18
AA. FRUIT BERRY-LIKE, RED . . . . . PACIFIC YEW - P. 20

Western White Pine
(PINUS MONTICOLA)

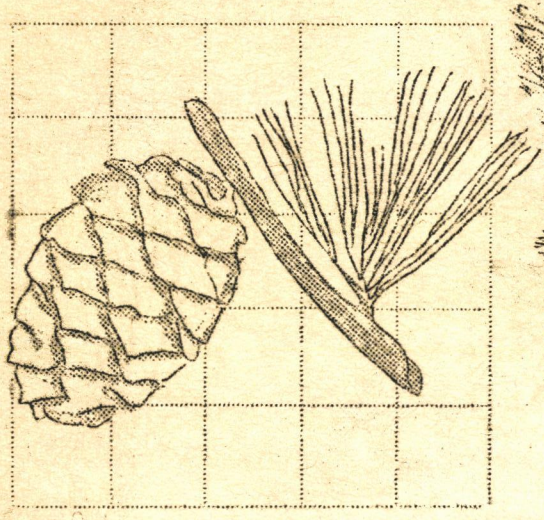






NEEDLES: 2"-4" LONG, IN CLUSTERS OF 5, FLEXIBLE, BLUISH GREEN.
CONES: 6"-10" LONG, GREEN OR PURPLE BEFORE OPENING, LIGHT BROWN WHEN RIPE, THINNER SCALED THAN OTHER PINES OF THE REGION, OCCUR PRINCIPALLY ON TOPS OF TREES.
BARK: SMOOTH SILVERY-WHITE ON YOUNG TREES, PURPLISH GRAY ON OLD TREES AND DISTINCTLY BROKEN UP INTO UNIFORM AND FIRM SQUARES.
GENERAL CHARACTERISTICS: STRAIGHT TRUNK WITH VERY LITTLE TAPER. BRANCHES IN HORIZONTAL LAYERS. THIS IS THE MOST IMPORTANT TIMBER TREE OF THE REGION. ITS LUMBER IS USED PRINCIPALLY FOR MILL WORK AND MATCHES.

Whitebark Pine
(PINUS ALBICAULIS)



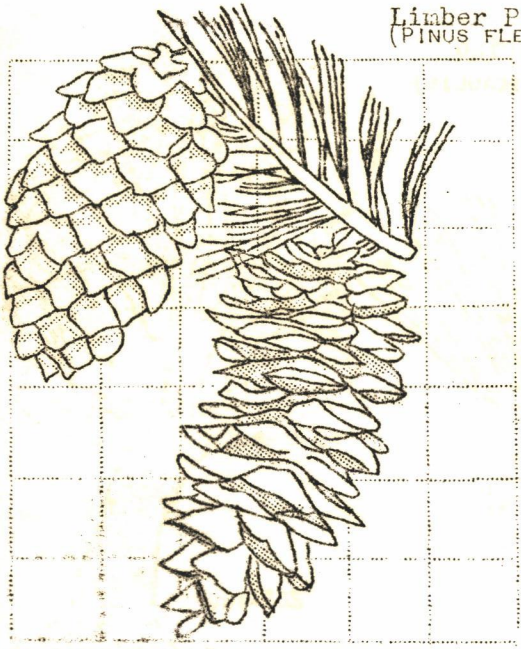
NEEDLES: $1\frac{1}{2}$"-$2\frac{1}{2}$" LONG IN CLUSTERS OF 5, STOUT, RIGID, SLIGHTLY INCURVED, DARK YELLOW-GREEN, CLUSTERS AT THE ENDS OF THE BRANCHES.

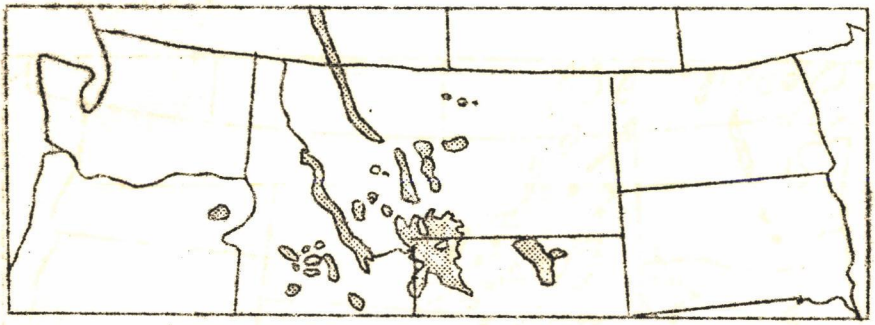
CONES: $1\frac{1}{2}$"-3" LONG, ALMOST OVAL, BLUNT, CHOCOLATE BROWN OR PURPLE WITH THICK, HEAVY SCALES NOT ARMED WITH PRICKLES, VERY RESINOUS, SCALES OPEN ONLY SLIGHTLY UPON RIPENING.

BARK: THIN, SCALY, AND LIGHT GRAY, HARDLY BROKEN INTO DEFINITE AREAS.

GENERAL CHARACTERISTICS: TREES USUALLY TWISTED AND STUNTED. OCCURS PRINCIPALLY AT HIGHER ELEVATIONS. OF LITTLE COMMERCIAL VALUE IN THE REGION. SEEDS SOMETIMES USED AS FOOD.

Limber Pine
(PINUS FLEXILIS)





NEEDLES: 1½"–3" LONG, IN CLUSTERS OF 5, STOUT, RIGID, DARK YELLOWISH-GREEN, FOLIAGE DENSELY CLUSTERED AT THE ENDS OF THE BRANCHES.

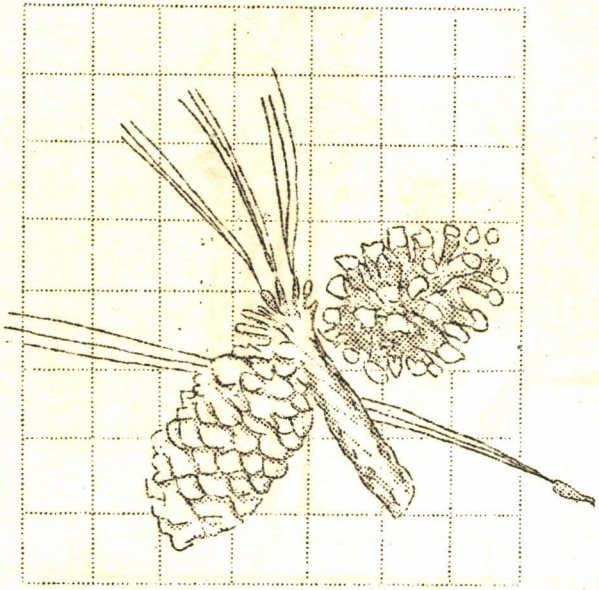
CONES: 3"–6" LONG, WIDER AT BASE AND GRADUALLY TAPERING TO THE TIP; RIPENED CONES PALE GREENISH-BROWN; CONE SCALES NARROW WITH GREATLY THICKENED TIPS AND OPENING AT MATURITY; SEEDS LARGE ALMOST THE SIZE OF PEANUTS.

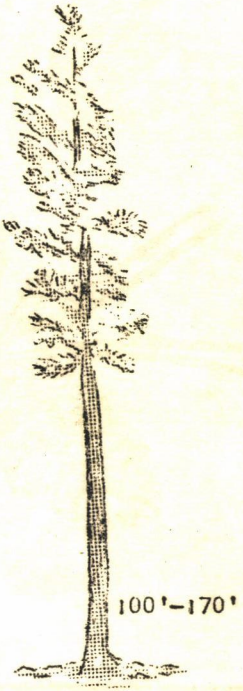
BARK: ON YOUNG TREES THIN, SMOOTH, AND SILVERY WHITE, BECOMING ON OLD TRUNKS 1"–2" THICK AND DARK BROWN OR BLACK DIVIDED BY DEEP FURROWS INTO BROAD RIDGES BROKEN INTO NEARLY SQUARE BLOCKS.

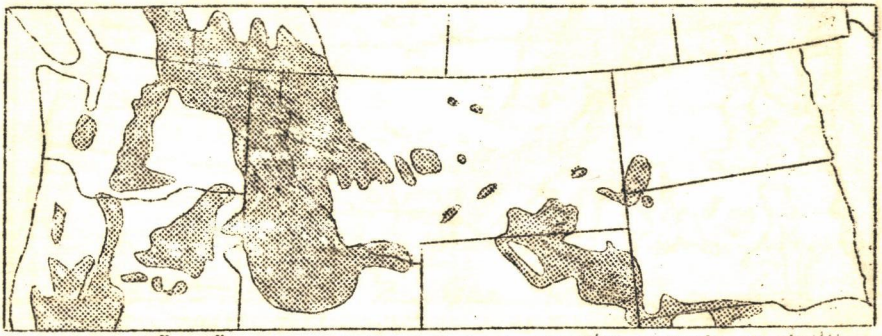
GENERAL CHARACTERISTICS: OLDER TREES USUALLY STUNTED, WITH STOUT BRANCHES. OCCURS USUALLY AT HIGHER ELEVATIONS. HAS LITTLE COMMERCIAL VALUE IN THE REGION. SEEDS QUITE EDIBLE.

Ponderosa Pine

(PINUS PONDEROSA)







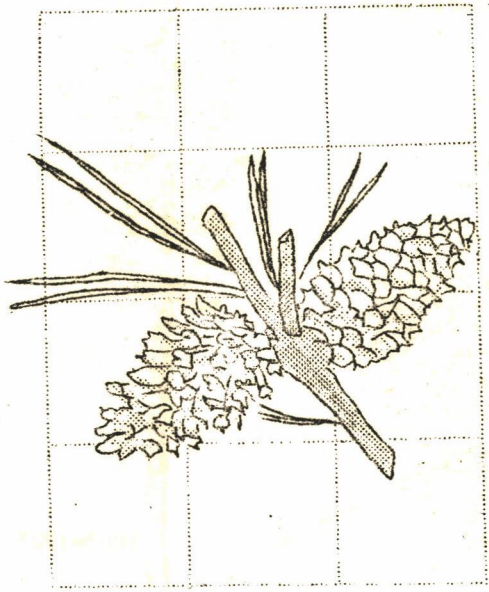
NEEDLES: 3"-10" LONG, USUALLY 3 IN A CLUSTER EXCEPT IN FAR EASTERN MONTANA WHERE USUALLY 2 OCCUR IN A BUNDLE, STOUT, DARK YELLOW GREEN, BORNE IN BRUSH-LIKE TUFTS AT THE END OF BRANCHES.

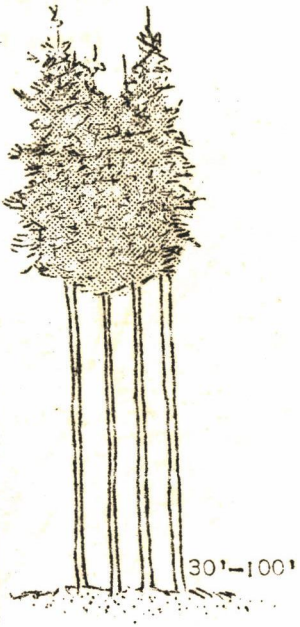
CONES: 2"-4" LONG, SHAPED LIKE A TOP, BRIGHT GREEN OR PURPLE WHEN FULLY GROWN, BECOMING LIGHT REDDISH BROWN, SCALES THICKENED AT TIPS AND EACH ARMED WITH A SHARP SPINE.

BARK: ON YOUNG TREES REDDISH BLACK AND NARROWLY FURROWED, ON OLD TREES MARKED BY BROAD, SHIELD-LIKE, RUSSET-RED PLATES.

GENERAL CHARACTERISTICS: THE OLD TREE IS MASSIVE WITH A STRAIGHT TRUNK AND USUALLY HEAVY CROOKED BRANCHES. THIS TREE IS THE SECOND MOST IMPORTANT COMMERCIAL TREE OF THE REGION. IT IS USED EXTENSIVELY FOR LUMBER.

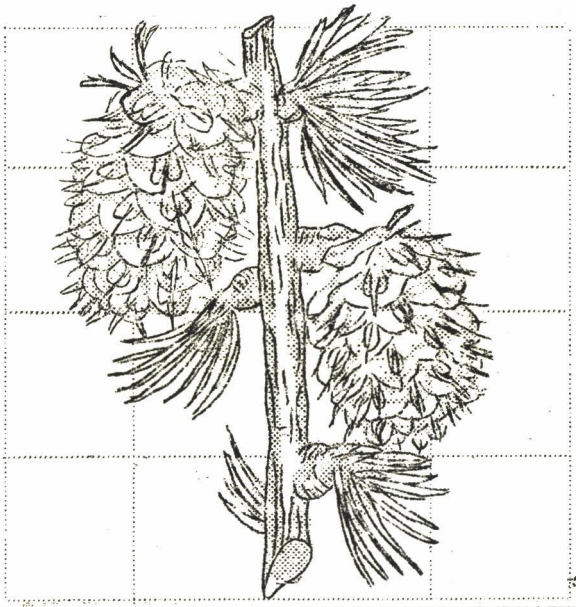
Lodgepole Pine
(PINUS CONTORTA)

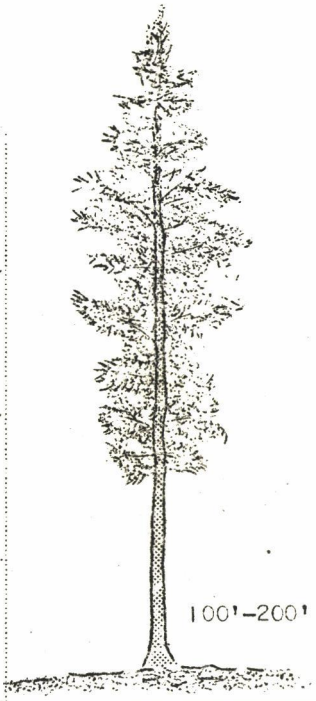


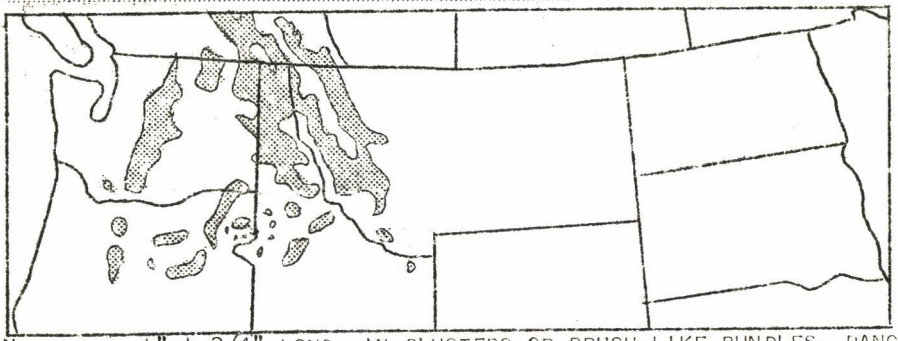


NEEDLES: 1"-3" LONG, 2 IN A BUNDLE, BRIGHT YELLOW GREEN, BORNE QUITE HEAVILY ALONG THE BRANCHES.
CONES: 1"-1½" LONG, USUALLY CONICAL BUT IRREGULARLY SO, LIGHT YELLOW BROWN AND LUSTROUS WHEN MATURE, VERY HARD THICKENED TIPS OF SCALES ARMED WITH SPINES, OCCASIONALLY OPENING AS SOON AS RIPE BUT USUALLY REMAINING CLOSED, USUALLY PERSIST A LONG TIME ON THE TREE.
BARK: THIN, SCALY, CLOSE AND FIRM, PALE BROWN.
GENERAL CHARACTERISTICS: TREES OFTEN FORM DENSE THICKETS BUT GROW IN THE OPEN AS WELL WHERE THEIR CROWNS ARE DENSE, ROUNDED OR CONICAL IN FORM. LODGEPOLE PINE IS TREATED WITH CREOSOTE AND USED TO A LIMITED EXTENT FOR POLES AND TIES. IT WAS USED EXTENSIVELY BY THE INDIANS FOR TEEPEE POLES.

Western Larch
(LARIX OCCIDENTALIS)







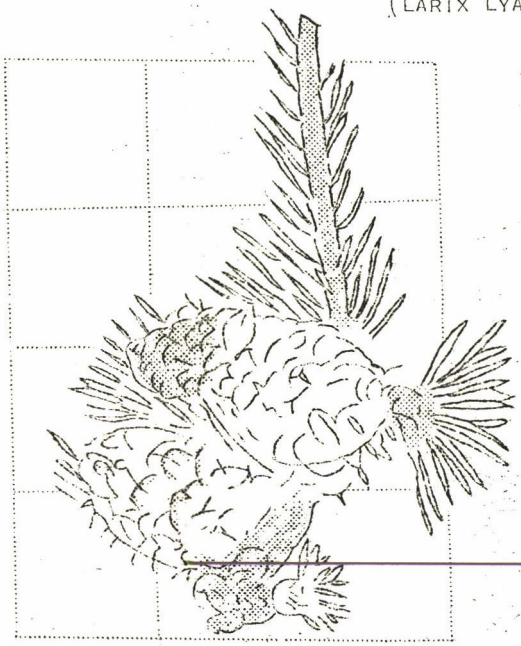
NEEDLES: 1"-1-3/4" LONG, IN CLUSTERS OR BRUSH-LIKE BUNDLES, RANGING FROM 14 TO ABOUT 30, TRIANGULAR, SHARP-POINTED, LIGHT PALE GREEN, TURNING A BEAUTIFUL GOLDEN YELLOW EARLY IN THE AUTUMN.

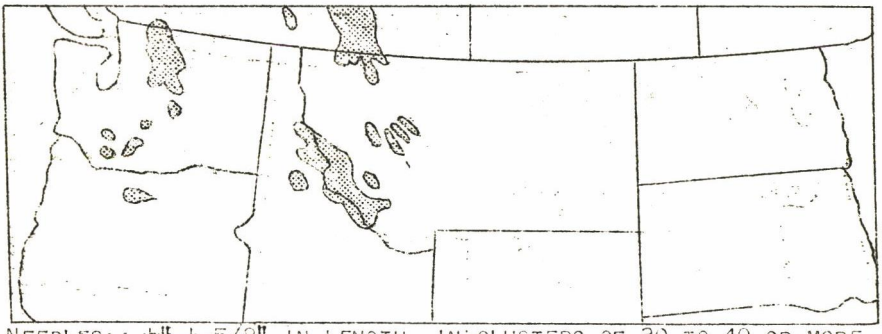
CONES: 1"-1½" LONG, OBLONG, WITH NUMEROUS THIN, STIFF SCALES, MATURE IN ONE SEASON AND RIPE EARLY IN AUGUST.

BARK: OF YOUNG STEMS, THIN, DARK-COLORED AND SCALY, BECOMING NEAR BASE OF OLD TRUNKS, 5"-6" THICK AND BROKEN INTO IRREGULARLY-SHAPED OBLONG PLATES, OFTEN 2 FEET LONG, AND COVERED WITH THIN, CLOSELY APPRESSED, LIGHT, CINNAMON-RED SCALES; RIDGES NEAR BASE OF OLD TREES, STRIKINGLY MASSIVE.

GENERAL CHARACTERISTICS: A LARGE FOREST TREE WITH A VERY OPEN CROWN, THINLY CLAD WITH LEAVES WHICH ARE LOST DURING THE WINTER.

Alpine Larch
(LARIX LYALLI)





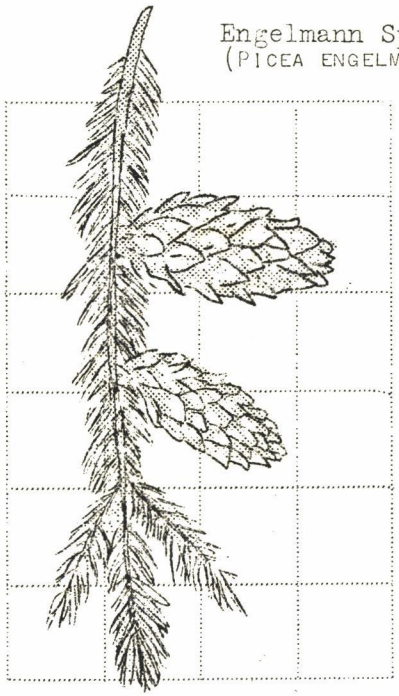
NEEDLES: 1"-1-5/8" IN LENGTH, IN CLUSTERS OF 30 TO 40 OR MORE, RIGID, SHORT, POINTED, PALE BLUE-GREEN, TURNING BRIGHT LEMON-YELLOW LATE IN AUTUMN.

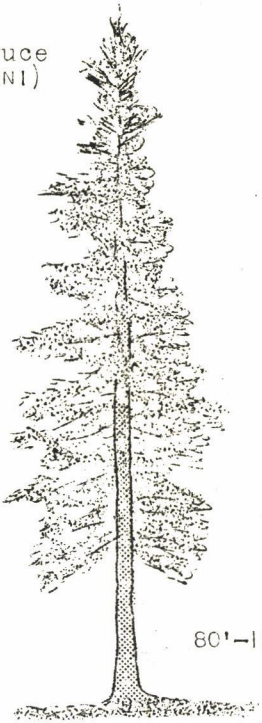
CONES: 1½"-2" LONG, ROUND, MATURE IN ONE SEASON AND ARE RIPE EARLY IN AUGUST; BRISTLY BRACTS, DEEP PURPLE IN COLOR, PROJECT FROM AMONG THE CONE SCALES, WHICH ARE DEEP PURPLE-RED WITH MARGINS HAVING A FRINGE OF TANGLED, FINE WHITE WOOL.

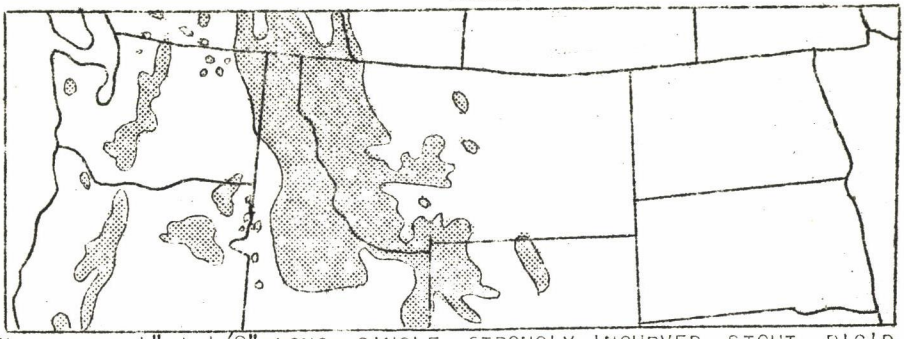
BARK: OF MATURE TREES RARELY MORE THAN 7/8" THICK; IT IS INDISTINCTLY FURROWED; THE IRREGULAR, FLAT RIDGES OF LOOSE SCALES ARE DEEP PURPLISH OR REDDISH BROWN. ON YOUNG TREES, BARK IS ASHY GRAY AS ARE THE CROWN BRANCHES OF OLDER TREES.

GENERAL CHARACTERISTICS: A VERY MUCH STUNTED TREE GROWING ONLY AT VERY HIGH ALTITUDES AT THE UPPERMOST LIMITS OF TREE GROWTH.

Engelmann Spruce
(PICEA ENGELMANNI)

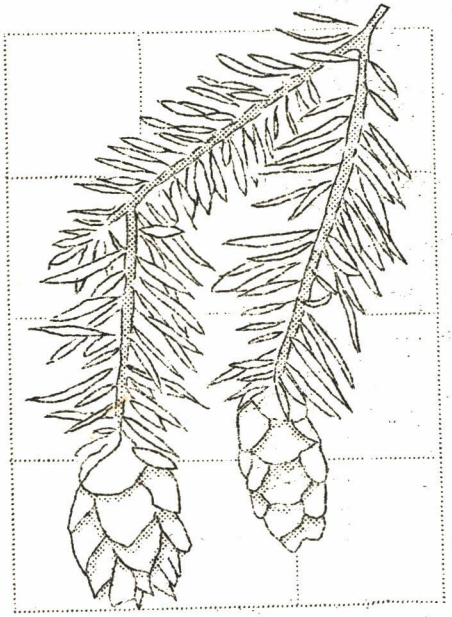


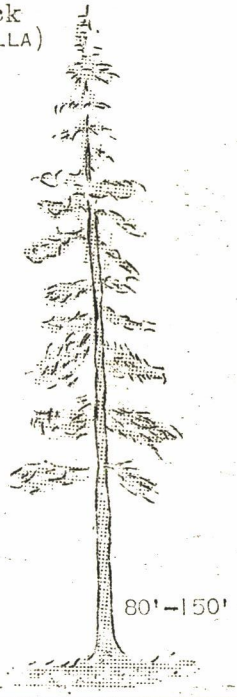


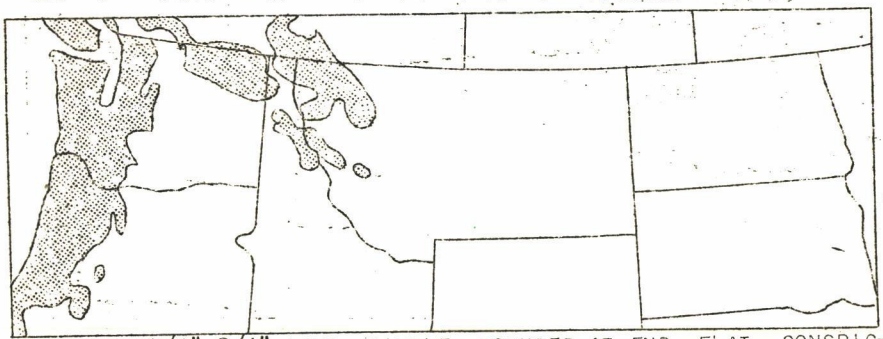


NEEDLES: 1"-1-1/8" LONG, SINGLE, STRONGLY INCURVED, STOUT, RIGID, AND TIPPED WITH LONG, SHARP POINTS; DULL BLUISH GREEN ON SOME TREES AND LIGHT OR DARK STEEL BLUE OR SILVERY WHITE ON OTHERS.
CONES: USUALLY ABOUT 2" LONG, OBLONG, GRADUALLY NARROWED TO THE ENDS, IN GREAT NUMBERS ON THE UPPER BRANCHES, LIGHT GREEN SOMEWHAT TINGED WITH SCARLET WHEN FULL GROWN, BECOMING LIGHT CHESTNUT BROWN AND LUSTROUS; MATURE IN A SINGLE SEASON.
BARK: SCALY, THIN, DARK PURPLISH-BROWN OR RUSSET-RED.
GENERAL CHARACTERISTICS: DISAGREEABLE-SMELLING FOLIAGE, STRAIGHT TRUNK WITH SPREADING AND DROOPING BRANCHES PRODUCED IN REGULAR WHORLS AND FORMING A NARROW SPIRE. COMMON IN COOL MOUNTAIN CANYONS ALONG STREAMS AND LAKESIDES.

Western Hemlock
(TSUGA HETEROPHYLLA)







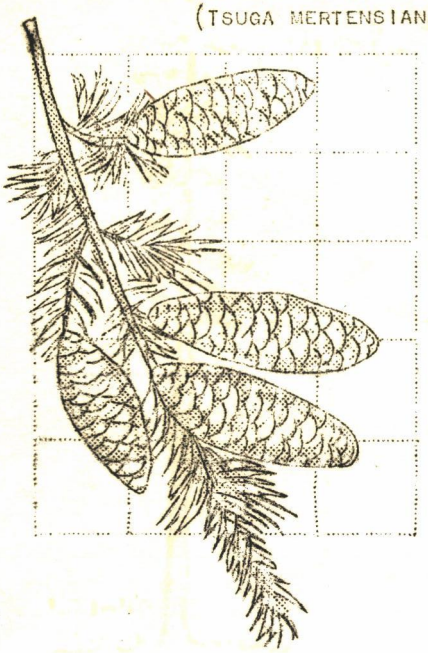
NEEDLES: 1/4"-3/4" LONG, SINGLE, ROUNDED AT END, FLAT, CONSPICUOUSLY GROOVED, DARK GREEN AND VERY LUSTROUS ON THE UPPER SURFACE, MARKED BELOW BY WHITE ROWS; LEAVES APPEAR TO GROW MAINLY FROM TWO OPPOSITE SIDES OF THE BRANCHLETS -- A SORT OF COMB-LIKE ARRANGEMENT.

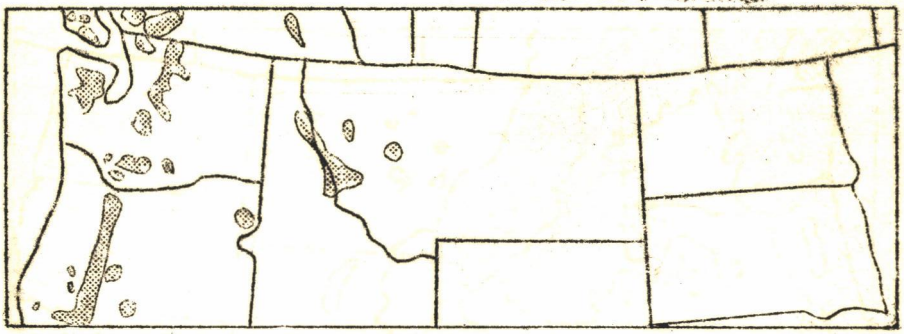
CONES: 1/2"-1" LONG, OBLONG, WITH OVAL SCALES, PENDULOUS, GREEN BEFORE OPENING AND WHEN OPEN ARE REDDISH CLAY-BROWN; MATURE IN A SINGLE SEASON AND ARE RIPE FROM THE MIDDLE TO THE END OF AUGUST.

BARK: GRAY TO RUSSET-BROWN, FIRM, ROUGH, ON OLD TRUNKS ABOUT 1-1/4"-1-1/2" THICK, DEEPLY FURROWED.

GENERAL CHARACTERISTICS: A TREE, OCCURRING ONLY IN THE MOST HUMID SITUATIONS IN OUR REGION, WITH VERY DENSE, YET FINE, DROOPING FOLIAGE, WHICH FORMS A PYRAMIDAL CROWN.

Mountain Hemlock
(TSUGA MERTENSIANA)





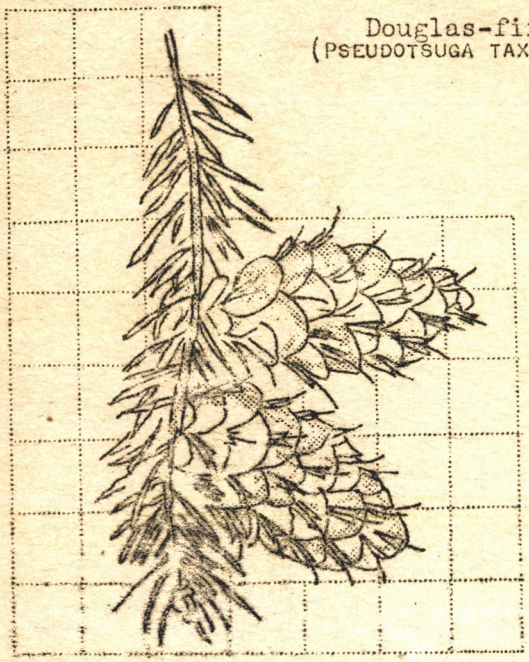
NEEDLES: $\frac{1}{2}$"-1" LONG, SINGLE, ROUNDED AND SOMETIMES SLIGHTLY GROOVED ON UPPER SURFACE, ROUNDED AND SLIGHTLY RIBBED ON THE LOWER SURFACE, BLUNTLY POINTED, STANDING OUT FROM ALL SIDES OF THE BRANCHES, COLOR VARIES FROM DARK TO PALE BLUE-GREEN.

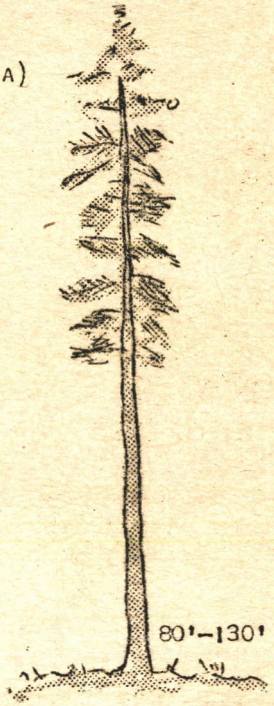
CONES: 1"-3" LONG, ABOUT $\frac{1}{2}$" THICK, OBLONG AND NARROWED TOWARD THE ENDS, USUALLY BRIGHT BLUISH-PURPLE OR OCCASIONALLY PALE YELLOW-GREEN; FULL GROWN IN ONE SEASON.

BARK: IS EARLY BROKEN AND ROUGH ON YOUNG TREES; ON OLD TREES ABOUT 1$\frac{1}{4}$" THICK AND DULL PURPLISH TO DARK REDDISH-BROWN, DEEPLY AND NARROWLY FURROWED, RIDGES ROUNDED AND SCALES DARK CINNAMON.

GENERAL CHARACTERISTICS: USUALLY A SHORT TO SPRAWLING TREE WITH DENSE, DROOPING FOLIAGE, GROWING AT HIGHER ELEVATIONS; PRACTICALLY NEVER USED FOR COMMERCIAL PURPOSES.

Douglas-fir
(PSEUDOTSUGA TAXIFOLIA)





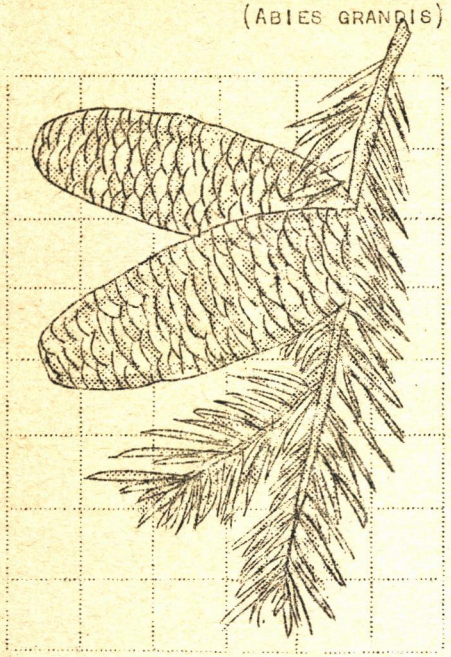
NEEDLES: 3/4"-1¼" LONG, STRAIGHT OR RARELY SLIGHTLY INCURVED, FLAT, SLIGHTLY GROOVED ABOVE, MARKED BENEATH BY TWO LIGHT BANDS, BLUNT TO POINTED AT END, DARK YELLOW-GREEN OR SOMETIMES LIGHT OR DARK BLUISH-GREEN.

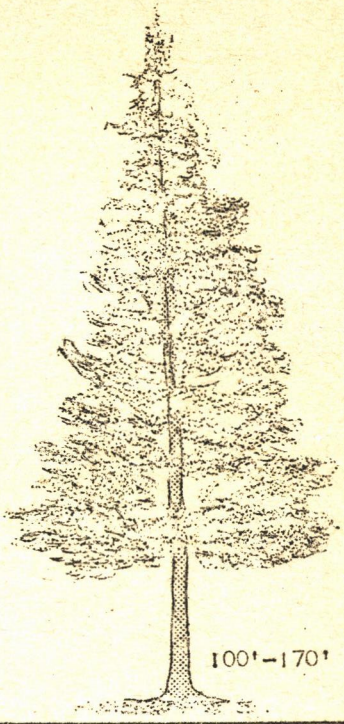
CONES: 2"-3" LONG, 3/4"-1" IN DIAMETER, OBLONG, WITH THREE POINTED BRACTS THRUST OUT BEYOND THE CONE SCALES; WHEN FULL GROWN, DARK BLUE-GREEN BELOW, PURPLISH TOWARD THE END; MATURE IN ONE SEASON.

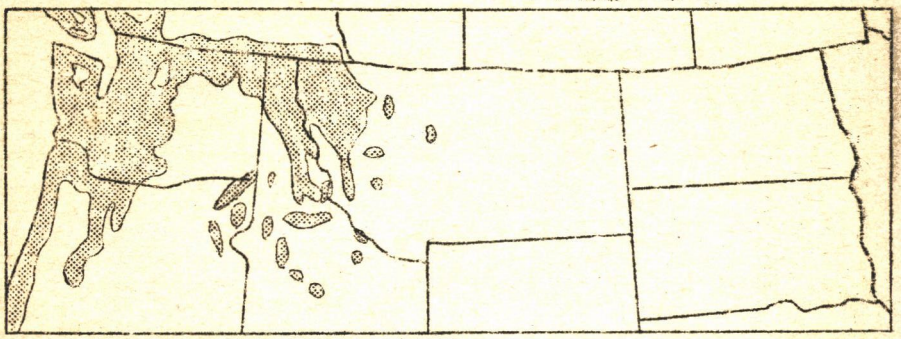
BARK: ON YOUNG TREES SMOOTH, MARKED BY RESIN BLISTERS; ON OLD TREES HEAVY, FIRM, DEEPLY GROOVED, GRAY TO GRAY-BROWN, CORKLIKE.

GENERAL CHARACTERISTICS: THOUGH A LARGE FOREST TREE, OTHER SPECIES ATTAIN LARGER SIZE IN OUR REGION. DOUGLAS-FIR IS USED EXTENSIVELY FOR CHRISTMAS TREES.

Grand Fir
(ABIES GRANDIS)







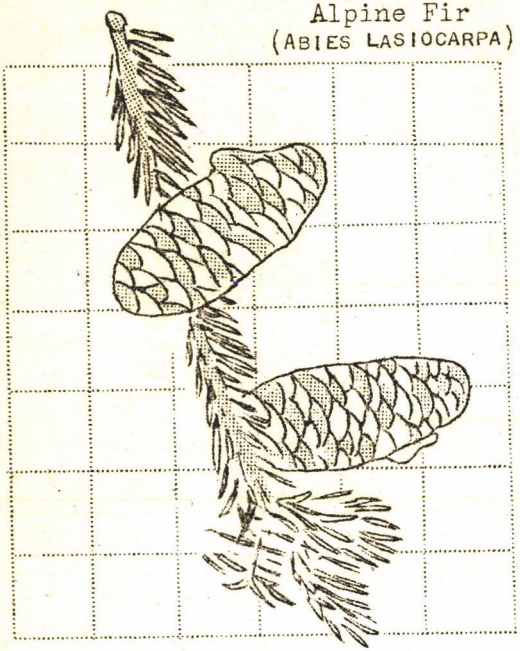
NEEDLES: 1"-2" LONG, FLAT, SINGLE, NOTCHED AT ENDS, STRAIGHT, THIN AND FLEXIBLE, DEEPLY GROOVED, VERY DARK GREEN AND LUSTROUS ON UPPER SURFACE, SILVERY WHITE ON LOWER SURFACE, STAND OUT DISTINCTLY FROM TWO OPPOSITE SIDES OF THE BRANCHES.

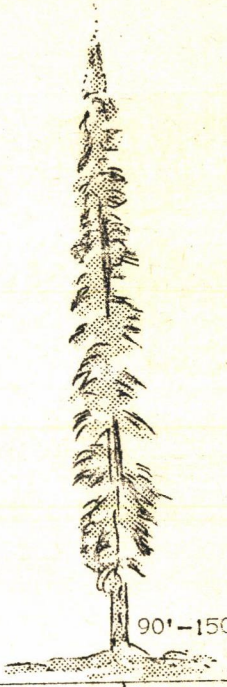
CONES: 2"-4" LONG, CYLINDRICAL, SLIGHTLY HAIRY, BRIGHT GREEN, ERECT, MATURING IN ONE SEASON, CONE SCALES FALL AWAY IN FALL LEAVING THE CENTRAL SPIKE POINTING SKYWARD ON THE TREE BRANCH.

BARK: SMOOTH AND ASHY BROWN ON YOUNG TREES, BECOMING ON OLD TREES 2"-3" THICK, DULL GRAY, HARD, ROUGH, AND DEEPLY FURROWED.

GENERAL CHARACTERISTICS: TRUNK USUALLY STRAIGHT. BRANCHES EXTEND TO WITHIN A FEW FEET OF THE GROUND WHEN OPEN GROWN BUT IN CLOSED STAND CROWN COVERS ABOUT 1/3 TO 1/2 OF STEM. THE CROWN IS POINTED IN YOUNG TREES BUT ROUNDED AT THE TOP IN OLD TREES.

Alpine Fir
(ABIES LASIOCARPA)





NEEDLES: 1"-1-3/4" LONG, SINGLE FLAT, BLUNT, DISTINCTLY MASSED AND POINTING UPWARD ON TOP SIDE OF THE BRANCHES, DEEP BLUE GREEN.

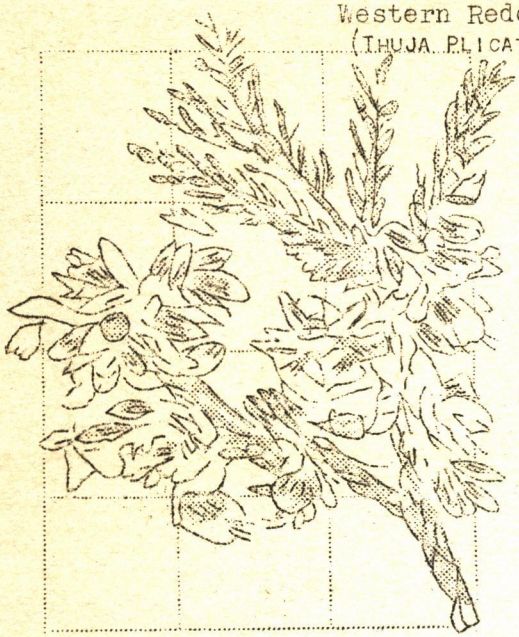
CONES: 2½"-4" LONG, OBLONG, SLIGHTLY NARROWED FROM MIDDLE TO THE ENDS, ROUNDED AT END, DEEP PURPLE BECOMING LIGHTER AT TIME OF SEED FALL, SCALES FALLING FROM CENTRAL AXIS IN FALL OF YEAR.

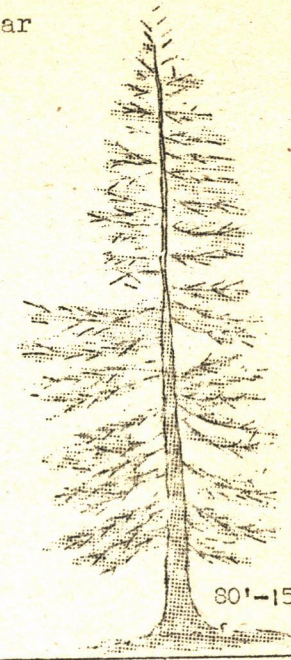
BARK: THIN, HARD, FLINTY, BUT LITTLE BROKEN EVEN ON FAIRLY LARGE TREES: UNBROKEN SMOOTH PARTS ASHY GRAY, OFTEN CHALKY WHITE; ON OLD TREES DIVIDED BY SHALLOW FISSURES AND ROUGHENED BY THICK, CLOSELY APPRESSED, CINNAMON-RED SCALES.

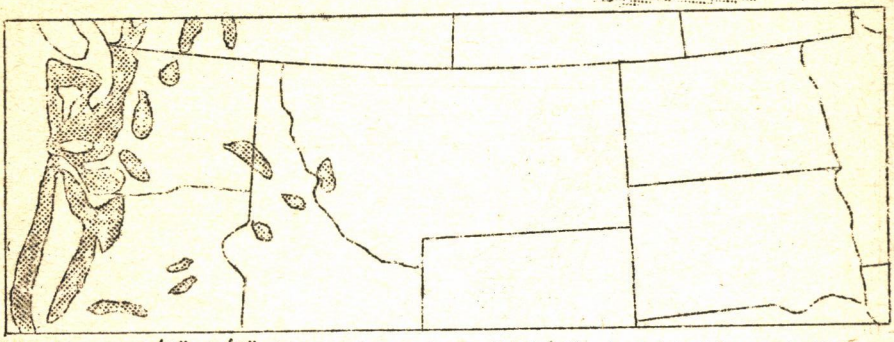
GENERAL CHARACTERISTICS: THE LONG, DENSE, NARROWLY CONICAL CROWN, TERMINATING IN A CONSPICUOUS SPIRE-LIKE POINT DISTINGUISHES THIS FIR FROM ALL OTHERS OF ITS KIND. MOST COMMON AT HIGH ELEVATIONS AND ALONG STREAMS IN COOL NARROW CANYONS.

Western Redcedar

(THUJA PLICATA)







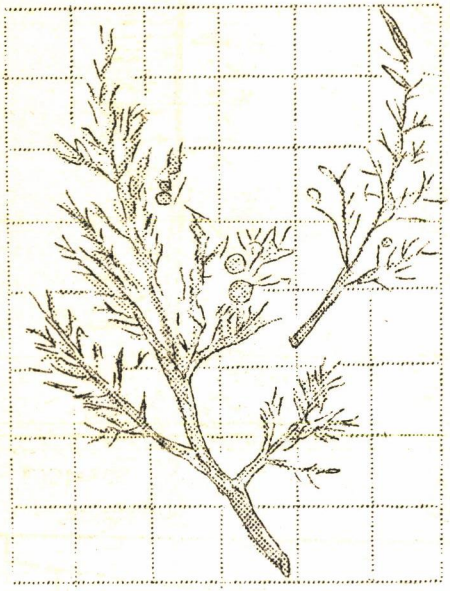
NEEDLES: 1/8"-1/4" LONG, OPPOSITE, MINUTE, OVERLAPPING, SCALE-LIKE, CONSPICUOUSLY FLAT ON SHORT SIDE BRANCHLETS, BRANCHLETS FORMING A FLAT SPRAY, SPRAYS DARK GREEN ABOVE AND LIGHT GREEN BENEATH.

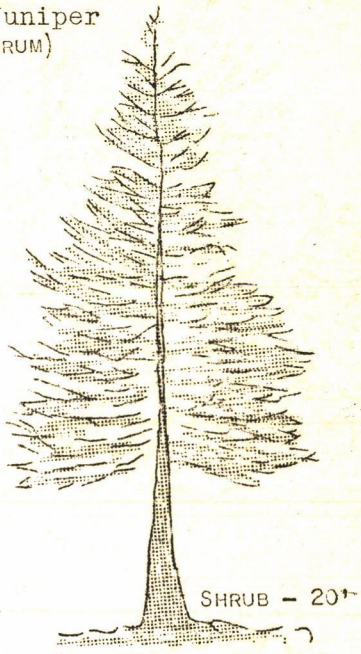
CONES: 1/2" LONG, ROUND TO OBLONG, COMPOSED OF ABOUT 8 THIN SCALES IN PAIRS, GREEN UNTIL TIME OF SEED DISPERSAL, THEN RUSSET-BROWN.

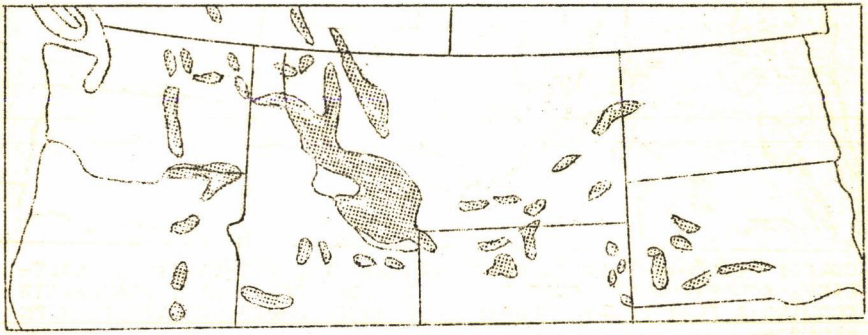
BARK: THIN, A CLEAR REDDISH, CINNAMON BROWN, OFTEN WEATHERED OUTWARDLY TO A GRAYISH BROWN, DISTINCTLY BUT SHALLOWLY SEAMED WITH NARROW RIDGES; STRINGY AND FIBROUS AND MAY BE SEPARATED INTO LONG, THIN STRIPS, INNER BARK VERY TOUGH AND STRONG.

GENERAL CHARACTERISTICS: VERY CONICAL IN FORM; OLD TREES ARE ENORMOUSLY "SWELL-BUTTED" AND CONSPICUOUSLY FLUTED AT BASE. A VERY IMPORTANT TREE IN OUR REGION, MUCH USED FOR TELEPHONE, TELEGRAPH, AND POWER-LINE POLES, AND FOR SHINGLES.

Rocky Mountain Juniper
(JUNIPERUS SCOPULORUM)







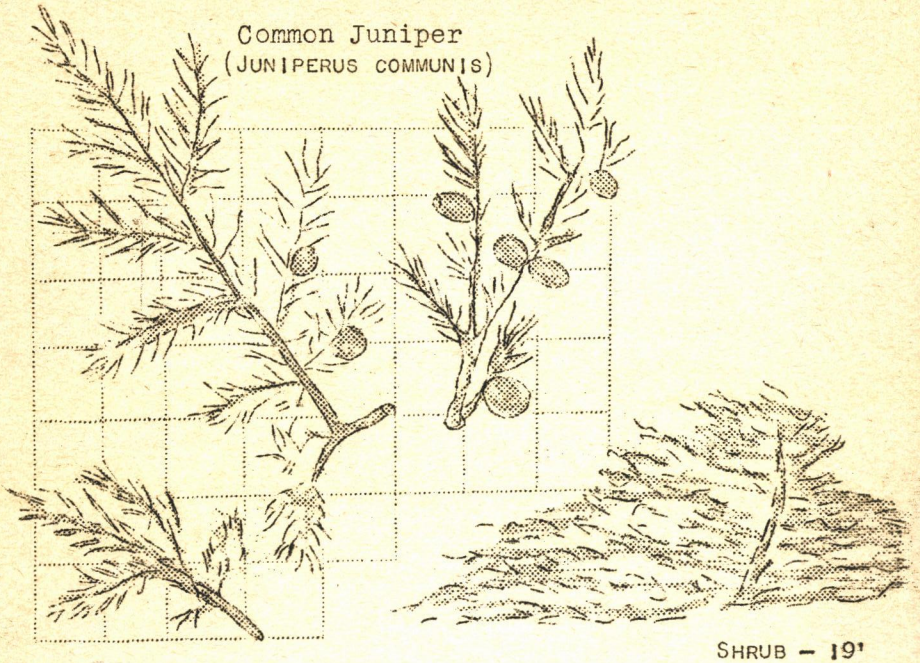
NEEDLES: USUALLY OPPOSITE, SCALE-LIKE ON MATURE BRANCHES, NEEDLE-LIKE ON YOUNG BRANCHES, PALE, ASHY-GREEN, SOMETIMES DARK GREEN, MARKED ON THE BACK BY A GLANDULAR PIT.

FRUIT: BERRY-LIKE, 1 - 2 SEEDED, LIGHT BLUE, COVERED WITH A WAXY BLOOM, 1/4-1/3 INCH IN DIAMETER, SWEET, RESINOUS, RIPENING AT END OF THE SECOND SEASON.

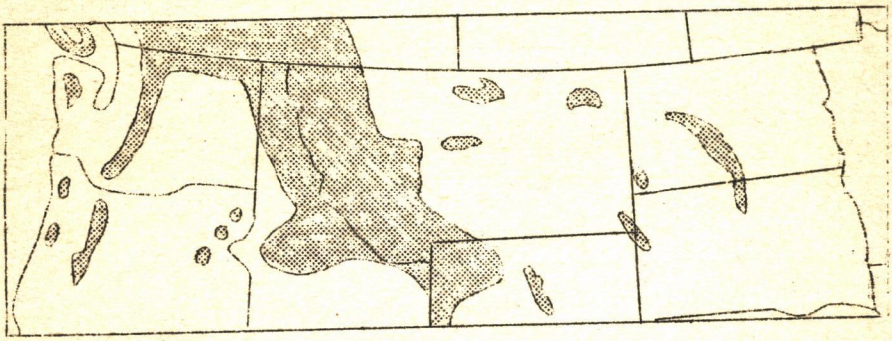
BARK: CLEAR, LIGHT CINNAMON-BROWN, DISTINCTLY CUT BY WIDE, SHALLOW FURROWS, STRINGY.

GENERAL CHARACTERISTICS: IN OPEN SITUATIONS IT IS SOMEWHAT BUSHY, FROM 15 TO 20 FEET HIGH, WITH A SHORT TRUNK, 16" OR LESS IN DIAMETER, AND A RATHER NARROW, ROUNDED CROWN OF LARGE, LONG LIMBS WHICH TREND UPWARD. SEVERAL STEMS OFTEN OCCUR TOGETHER. THRIVES ON DRY SOILS. PRIZED FOR POSTS BECAUSE OF ITS DURABILITY.

Common Juniper
(JUNIPERUS COMMUNIS)



SHRUB – 19'



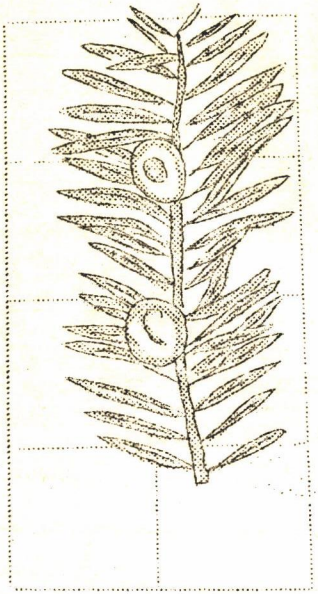
NEEDLES: 1/2" OR LESS IN LENGTH, NEEDLE-LIKE OR NARROW LANCE-SHAPED, SHARP POINTED, RATHER RIGID, DEEPLY CHANNELED, IN GROUPS OF THREE. DARK LUSTROUS GREEN ON THE LOWER SIDE, CHALK WHITE ABOVE.

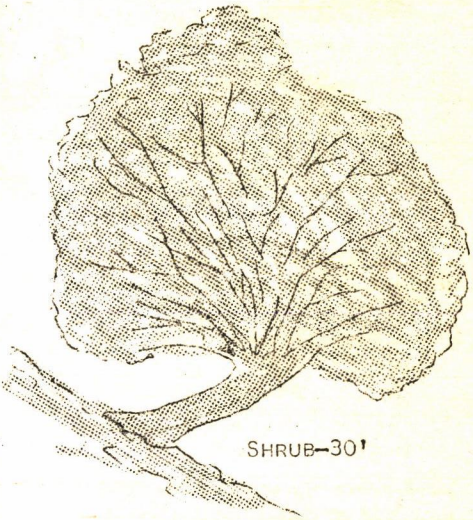
FRUIT: BERRY-LIKE, 1-3 SEEDED, DARK BLUE WITH A WAXY BLOOM, TOP CONSPICUOUSLY MARKED BY 3 BLUNT PROJECTIONS, DRY, RESINOUS, AROMATIC AND SWEET, MATURES IN TWO SEASONS.

BARK: LESS THAN 1/8" THICK, DEEP CHOCOLATE BROWN, TINGED WITH RED, AND COMPOSED OF LOOSELY ATTACHED, EXTREMELY THIN SCALES.

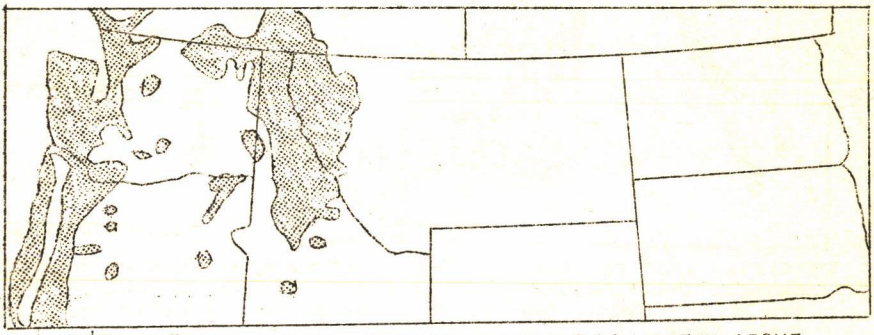
GENERAL CHARACTERISTICS: MORE WIDELY DISTRIBUTED THAN ANY OTHER TREE INHABITING THE NORTHERN HALF OF THE WORLD. ALWAYS A SHRUB LESS THAN 5 FEET IN HEIGHT IN OUR REGION. FORMS CONTINUED TANGLED MASSES FROM 5 TO 10 YARDS ACROSS. GROWS ON HIGHEST AND MOST EXPOSED SLOPES.

Pacific Yew
(TAXUS BREVIFOLIA)





SHRUB—30'



NEEDLES: $\frac{1}{2}$" – 1" LONG, FLAT, POINTED, DARK YELLOW-GREEN ABOVE, PALER BELOW, SOFT TO TOUCH, OCCUR ON BRANCHLETS TO FORM FLAT SPRAYS.

FRUIT: BERRY-LIKE, BROADER THAN LONG, BRIGHT CORAL-RED, CONTAINING ONE SEED, RIPE IN SEPTEMBER, BEGINS TO FALL DURING OCTOBER, MATURES IN ONE SEASON.

BARK: CONSPICUOUSLY THIN, RARELY OVER $\frac{1}{4}$" THICK, COMPOSED OF THIN, PAPERY, PURPLE, EASILY DETACHED SCALES, BENEATH WHICH THE NEWER BARK IS A CLEAR ROSE- OR PURPLE-RED.

GENERAL CHARACTERISTICS: A SMALL TREE RARELY OVER 30 FEET HIGH IN OUR REGION, COMMONLY A SHRUB, BRANCHING FREELY INTO BROAD, FLAT SPRAYS. WOOD HEAVY, HARD, STRONG: USED FOR FENCE POSTS AND BY THE INDIANS FOR PADDLES, SPEAR-HANDLES, BOWS, AND FISHHOOKS.

HARDWOODS

TREES SUCH AS THE POPLARS, WILLOWS, MAPLES, AND BIRCHES ARE COMMONLY GROUPED TOGETHER AND KNOWN AS HARDWOODS, BROADLEAF TREES, OR DECIDUOUS TREES. THOUGH KNOWN AS HARDWOODS, THEIR WOOD IS NOT ALWAYS HARD. THE POPLARS, FOR EXAMPLE, USUALLY HAVE RATHER SOFT WOOD. THE NAME, BROADLEAF, IS SUITABLE AS TREES OF THIS GROUP GENERALLY HAVE THIN, FLAT, BROAD LEAVES INSTEAD OF THE NEEDLE-LIKE LEAVES OF THE SOFTWOODS. THE NAME, DECIDUOUS, ALSO FITS THE TREES OF THIS GROUP IN OUR REGION VERY WELL AS ALL, EXCEPT CURLLEAF MOUNTAIN-MAHOGANY, DROP THEIR LEAVES IN THE FALL.

TREES OF THIS GROUP ARE MOST FREQUENTLY FOUND IN MONTANA AND NORTHERN IDAHO ALONG STREAM COURSES OR INHABITING OTHER MOIST SITES. IN NUMBERS AND COMMERCIAL IMPORTANCE THEY ARE FAR OUTBALANCED BY THE SOFTWOOD GROUP WHICH FURNISHES PRACTICALLY ALL THE LOGS CUT BY OUR SAWMILLS. BUT WHAT THE TREES OF THIS GROUP LACK IN THESE RESPECTS THEY MAKE UP FOR IN BEAUTY.

HARDWOODS

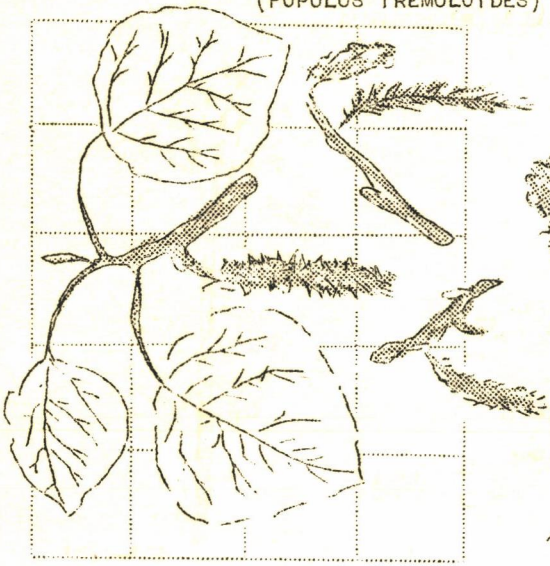
KEY TO SPECIES

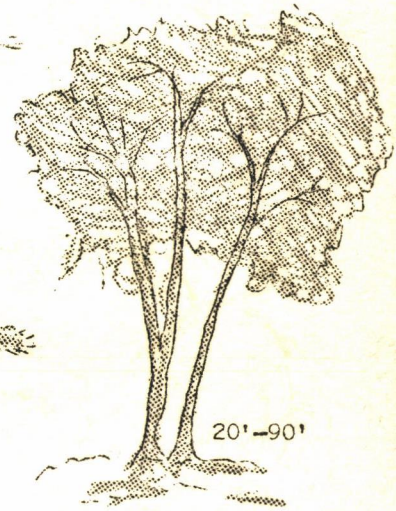
A. LEAVES OR LEAF-SCARS OPPOSITE.
  B. LEAVES SIMPLE. . . . . .DWARF MAPLE – P. 32
  BB. LEAVES COMPOUND.
    C. SEVEN TO NINE LEAFLETS; EDGES OF LEAFLETS WITH FINE TEETH. . . . . GREEN ASH – P. 39
    CC. USUALLY 3, RARELY 5–7 LEAFLETS WITH COARSE TEETH BOXELDER – P. 31

AA. LEAVES OR LEAF-SCARS ALTERNATE.
  B. LEAVES EVERGREEN . . . . . CURLLEAF MOUNTAIN-MAHOGANY– P. 41
  BB. LEAVES DECIDUOUS.
    C. BUDS COVERED WITH ONE OR TWO VISIBLE BUD-SCALES.
      D. A SINGLE SCALE COVERING THE ENTIRE BUD; BUDS NOT STALKED; LEAVES COMMONLY SLENDER. PEACHLEAF WILLOW – P. 33
      DD. TWO SCALES COVERING THE BUD; BUDS RAISED UPON DISTINCT STALKS; LEAVES BROAD; FRUIT WOODY, CONE-LIKE.
        E. UPPER SURFACE OF TWIGS TINGED WITH YELLOW; LEAF MARGINS SINGLE TOOTHED . . . . . WHITE ALDER – P. 35
        EE. UPPER SURFACE OF TWIGS NOT TINGED WITH YELLOW; LEAF MARGINS DOUBLE SHARP-TOOTHED . . .THINLEAF ALDER – P. 34
    CC. BUDS COVERED WITH THREE TO MANY VISIBLE BUD-SCALES.
      D. BARK PAPERY OR LEATHERY, PEELING READILY AROUND THE TRUNK.
        E. TWIGS BITTER TO THE TASTE, SEVERAL BUD-SCALES VISIBLE; WESTERN CHOKECHERRY – P. 36
        EE. TWIGS NOT BITTER TO THE TASTE, THREE BUD-SCALES GENERALLY VISIBLE.
          F. BARK ORANGE-BROWN TO GRAYISH WHITE; LEAVES 2–4 INCHES LONG . . . . . PAPER BIRCH–P. 30
          FF. BARK VERY DARK COPPER-BROWN, LEAVES 1–2 INCHES LONG. . . . . WATER BIRCH – P. 29
      DD. BARK SMOOTH, RIDGED, OR SCALY, NOT PEELING READILY.
        E. BRANCHLETS FREQUENTLY ARMED WITH THORNS.
          F. BUDS PLUMP AND ROUNDED, LEAF MARGINS USUALLY IRREGULARLY NOTCHED OR LOBED . . . WESTERN THORNAPPLE – P. 38
          FF. BUDS SHARP POINTED; LEAF MARGINS SINGLY TOOTHED, NOT LOBED. . . . . AMERICAN PLUM – P. 37
        EE. BRANCHLETS NOT ARMED WITH THORNS.
          F. BUDS RESINOUS TO THE TASTE, TERMINAL BUDS PRESENT.
            G. LEAF STEMS FLATTENED.
              H. LEAF BLADES NEARLY CIRCULAR, 1–2 INCHES WIDE GOLDEN ASPEN – P. 23
              HH. LEAF BLADES BROADLY TRIANGULAR, 2–4 INCHES WIDE . . . . . PLAINS COTTONWOOD – P. 26
            GG. LEAF STEMS ROUND.
              H. LEAF BLADES BROADLY EGG-SHAPED IN OUTLINE; LARGE.
                I. LEAF BLADES ONE-HALF TO THREE-FIFTHS AS WIDE AS LONG; BUDS VERY RESINOUS . .BALSAM POPLAR – P. 25
                II. LEAF BLADES ABOUT TWO-THIRDS AS BROAD AS LONG OR BROADER. NORTHERN BLACK COTTONWOOD – P. 24
              HH. LEAF BLADES LANCE-SHAPED.
                I. LEAF STEMS ONE-THIRD AS LONG AS LEAF BLADES OR SHORTER; LEAF BLADES NARROWLY LANCE-SHAPED NARROWLEAF COTTONWOOD –P. 27
                II. LEAF STEMS MORE THAN ONE-THIRD AS LONG AS THE LEAF BLADES; LEAF BLADES PROPORTIONATELY BROADER WITH OPPOSITE SIDES MORE OR LESS PARALLEL. LANCELEAF COTTONWOOD – P. 28
          FF. BUDS NOT RESINOUS TO THE TASTE, TERMINAL BUD ABSENT. . . . . .AMERICAN ELM – P. 40

Golden Aspen

(POPULUS TREMULOIDES)



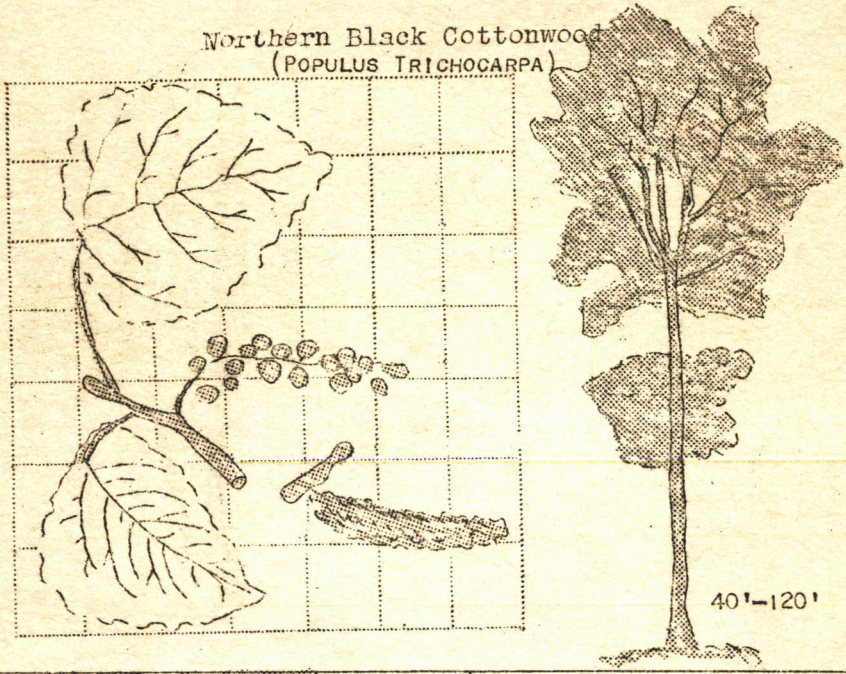


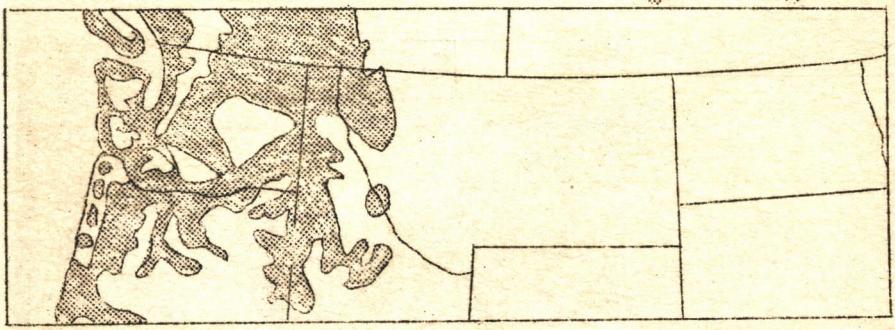
LEAVES: SMALL AND ROUNDED, THIN, SMOOTH, GREEN AND LUSTROUS ABOVE, DULL GREEN BELOW, WITH LONG STEMS THAT NARROW AT THE TWIG, ALLOWING THE LEAVES TO FLUTTER IN THE SLIGHTEST BREEZE. FROM THIS COMES ITS COMMON NAME, QUAKING OR TREMBLING ASPEN. IN AUTUMN LEAVES BECOME A CLEAR GOLDEN YELLOW, SOMETIMES ORANGE OR NEARLY RED.

BARK: THIN, GRAY-WHITE TO PALE YELLOW-BROWN OR ORANGE-GREEN. OFTEN ROUGHENED BY HORIZONTAL BANDS OF CIRCULAR WART-LIKE PROTUBERANCES.

GENERAL CHARACTERISTICS: IN VERY EXPOSED PLACES TREE MAY BE GREATLY STUNTED WITH ALMOST PROSTRATE STEMS. IN PURE, DENSE STANDS TREES HAVE STRAIGHT TRUNKS, CLEAN OF BRANCHES FOR TWO-THIRDS OF THEIR LENGTH. BRANCHES FORM A ROUND-TOPPED HEAD.

Northern Black Cottonwood
(POPULUS TRICHOCARPA)





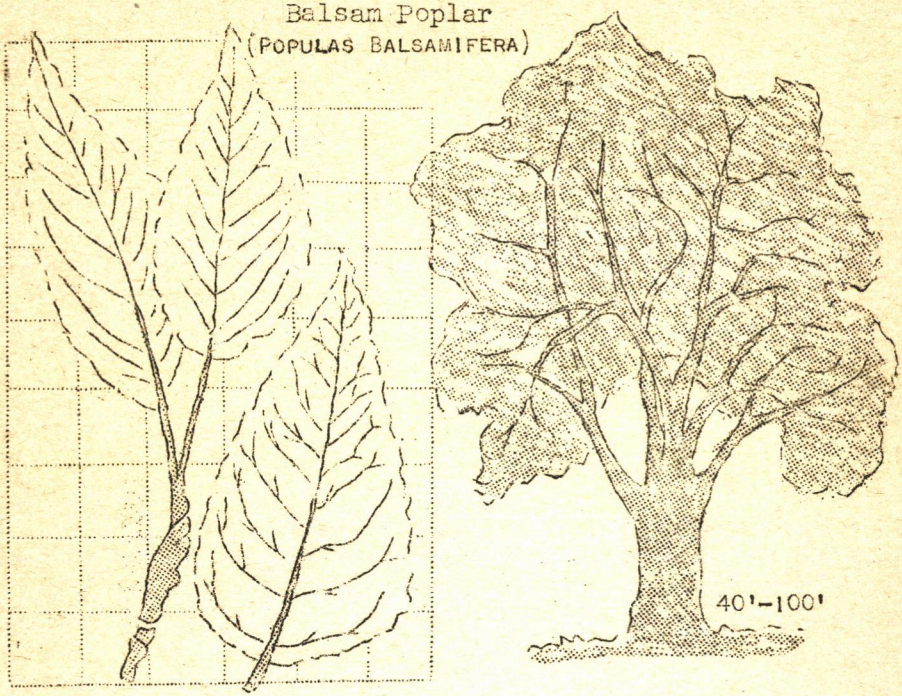
LEAVES: LARGE, BROAD, ROUNDED AT BASE, THICK, LEATHERY, SMOOTH AND DEEP SHINY GREEN ON UPPER SURFACE, VERY VEINY AND SILVERY WHITE ON LOWER SURFACE.

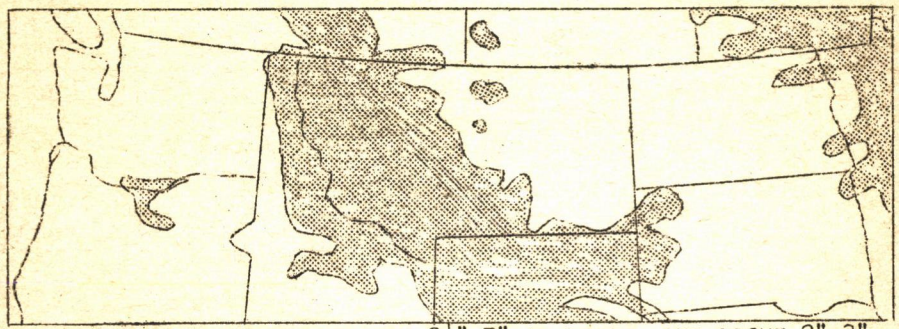
BARK: TRUNK BARK PALE GRAY, REGULARLY, DEEPLY AND SHARPLY FURROWED FROM 1 TO 2½ INCHES THICK.

GENERAL CHARACTERISTICS: ITS STRAIGHT OR SOMETIMES SLIGHTLY BENT TRUNK IS COMMONLY CLEAN OF BRANCHES FOR A HEIGHT OF 60 TO 80 OR MORE FEET. TREES GROWN IN OPEN HAVE BROAD OVAL-SHAPED CROWNS, BUT CROWN OF FOREST TREES IS OPEN, SHORT, AND WIDE. GROWS ALONG WATER COURSES IN SANDY, RICH, HUMUS SOILS.

Balsam Poplar

(POPULAS BALSAMIFERA)





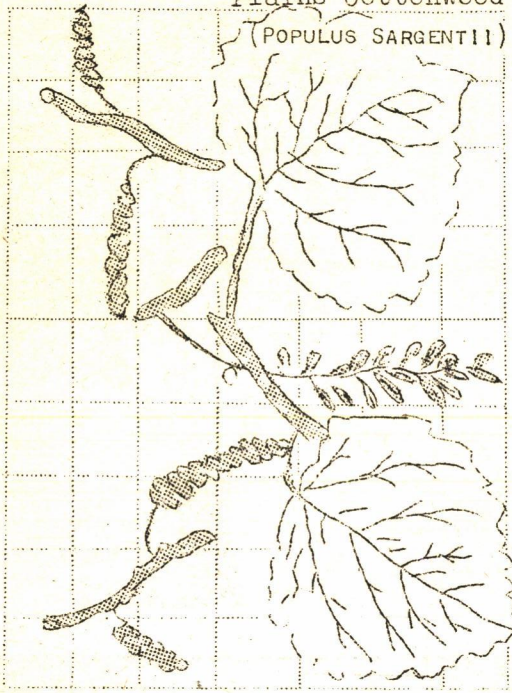
LEAVES: MATURE LEAVES USUALLY 3½"-5" IN LENGTH AND ABOUT 2"-3" WIDE. SLIGHTLY LEATHERY, SMOOTH, DARK GREEN AND SHINY ON UPPER SURFACE; LIGHT GREEN, WHITISH, OR RUST COLORED AND VERY VEINY ON THE UNDER SURFACE. LEAF STEMS ARE ROUND, SMOOTH, AND VERY SLENDER, AND ARE ABOUT 1-3/4"-2" LONG.

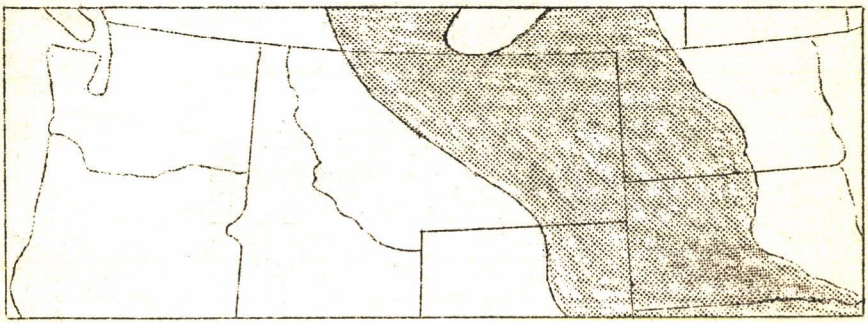
BARK: OF LARGE TRUNKS IS SLIGHTLY REDDISH GRAY AND HAS REGULAR DEEP FURROWS AND WIDE RIDGES; OF YOUNG TREES, BROWNISH GRAY, SOMETIMES WITH A GREENISH SHADE, AND SMOOTH OR MORE OR LESS ROUGHENED BY BLACKISH PROTUBERANCES.

GENERAL CHARACTERISTICS: LARGE CHESTNUT-BROWN, POINTED BUDS, 5/8" TO NEARLY AN INCH LONG, THICKLY COATED WITH A YELLOWISH, PUNGENTLY FRAGRANT BALSAM. STEMS ARE STRAIGHT AND CLEAN. ONE OF THE LARGEST OF THE POPLARS.

Plains Cottonwood

(POPULUS SARGENTII)



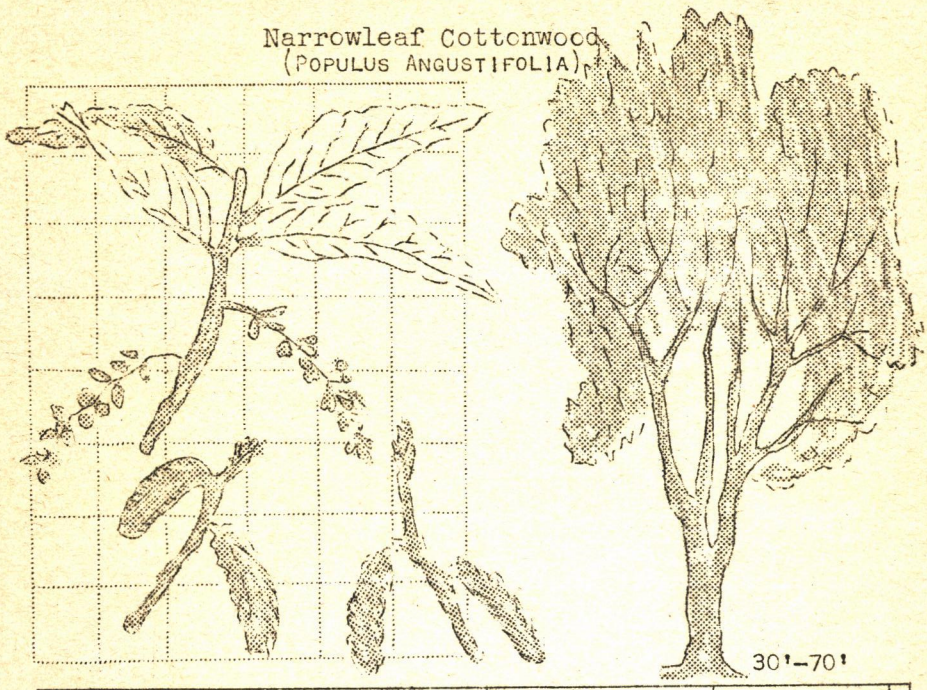


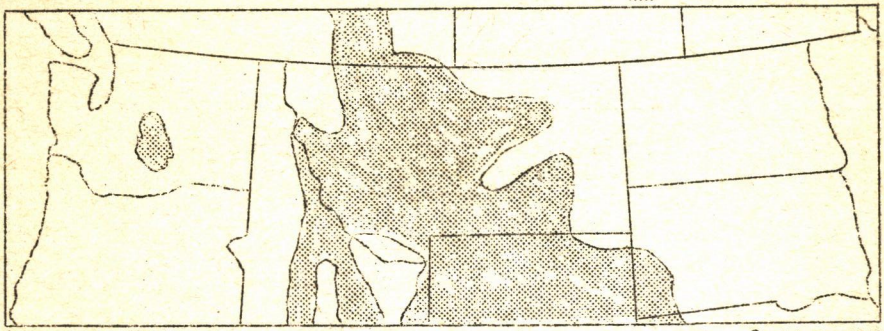
LEAVES: MATURE LEAVES ARE FIRM, SMOOTH, LIGHT YELLOW–GREEN AND SHINY ON THE UPPER SURFACE, PALE GREEN ON THE LOWER SURFACE. FROM 1½"–3½" LONG AND FROM 2"–4" WIDE. THE MIDRIFF AND LEAF STEM ARE SLENDER. LEAF STEM FLATTENED, FROM 2¼"–3½" LONG.

BARK: OF LARGE TREES, THICK, EXTERNALLY GRAY, DEEPLY FURROWED, AND RIDGED. ON YOUNG TRUNKS, SMOOTH OR ONLY SHALLOWLY FURROWED AND GRAYISH.

GENERAL CHARACTERISTICS: BUDS ARE BROWNISH–YELLOW AND SLIGHTLY HAIRY. TREE GROWS LARGE UNDER FAVORABLE CONDITIONS, BUT ON HIGHER PLAINS BECOMES STUNTED AND MISSHAPEN WHERE EXPOSED TO THE WIND.

Narrowleaf Cottonwood
(POPULUS ANGUSTIFOLIA)



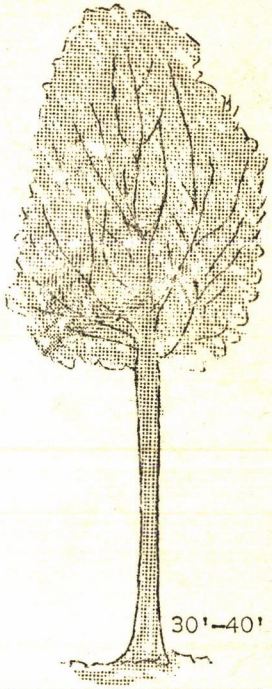


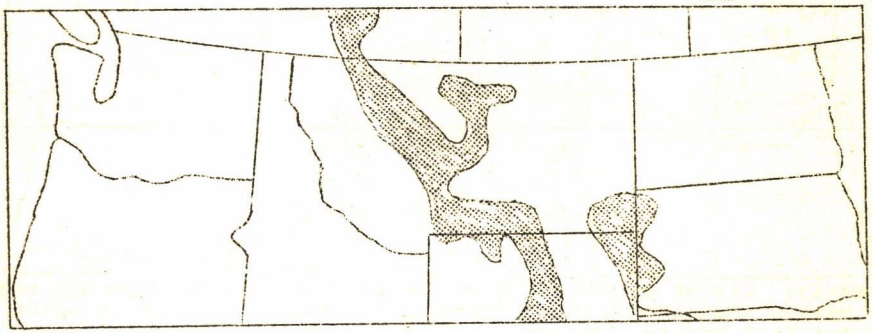
LEAVES: MATURE LEAVES ARE THIN BUT FIRM IN TEXTURE. SMOOTH AND YELLOWISH-GREEN ON UPPER SURFACE, AND SMOOTH (OR RARELY HAIRY) AND PALE YELLOW-GREEN ON THE UNDER SURFACE. MARGINS SOMEWHAT THICKENED AND SLIGHTLY TURNED DOWNWARD. RANGE IN LENGTH FROM 1-3/4"-6" AND IN WIDTH FROM ABOUT 3/4"-1½". LEAF STEMS ARE SHORT, SLENDER, AND SLIGHTLY FLATTENED ON THE UPPER SIDE.

BARK: OF LARGER TRUNKS, LIGHT GRAYISH-BROWN AND BROKEN INTO SHALLOW GROOVES AND WIDE, FLAT-FACED RIDGES. OF YOUNG TREES, SMOOTH, UNBROKEN, AND PALE GRAYISH-GREEN TINGED WITH YELLOW.

GENERAL CHARACTERISTICS: ITS NARROW, WILLOW-LIKE LEAVES GIVE THE CROWN A DISTINCTIVE THIN-FOLIAGED ASPECT. CROWN IS NARROWLY PYRAMIDED IN OUTLINE.

Lanceleaf Cottonwood
(POPULUS ACUMINATA)





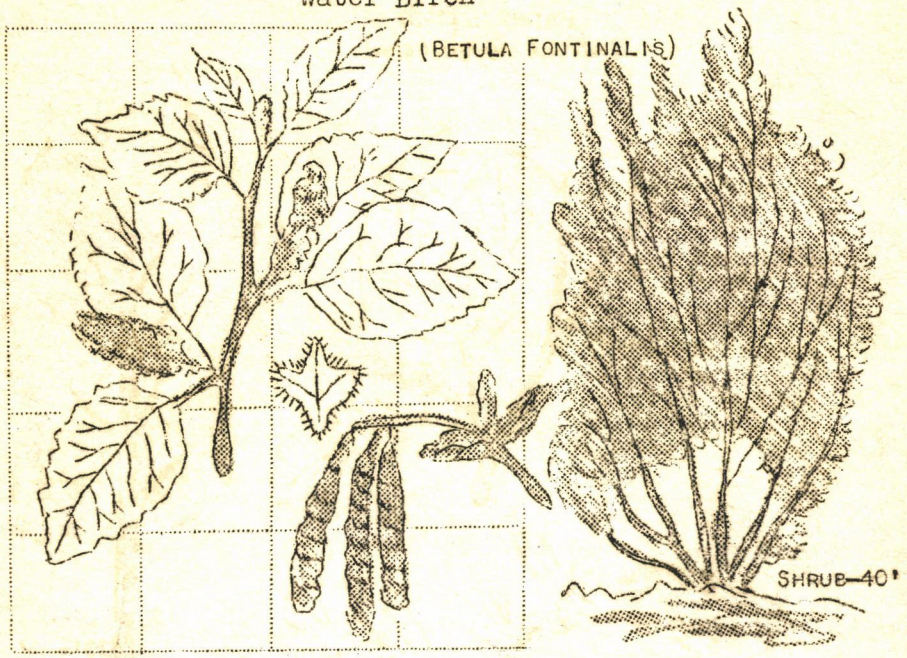
LEAVES: MATURE LEAVES, 2"-4" IN LENGTH AND FROM 3/4" TO AN INCH OR 2" IN WIDTH. THICKISH AND LEATHERY. DEEP GLOSSY GREEN ON UPPER SURFACE AND DULL GREEN ON UNDER SURFACE; SLENDER MIDVEIN AND ITS BRANCHES LIGHT YELLOW. PENDULOUS.

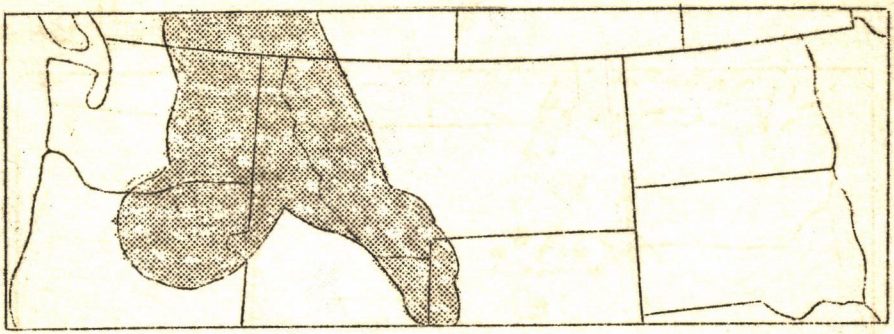
BARK: OF LARGER TRUNKS, APPROXIMATELY 1/2" THICK. LIGHT GRAYISH BROWN AND BROKEN INTO NARROW FURROWS AND WIDE FLAT RIDGES. OF YOUNG TREES, SMOOTH AND WHITISH.

GENERAL CHARACTERISTICS: DENSE, ROUNDED CROWN. RATHER SMALL TREE. IN GENERAL, ITS HABITAT IS RATHER ARID REGIONS.

Water Birch

(BETULA FONTINALIS)





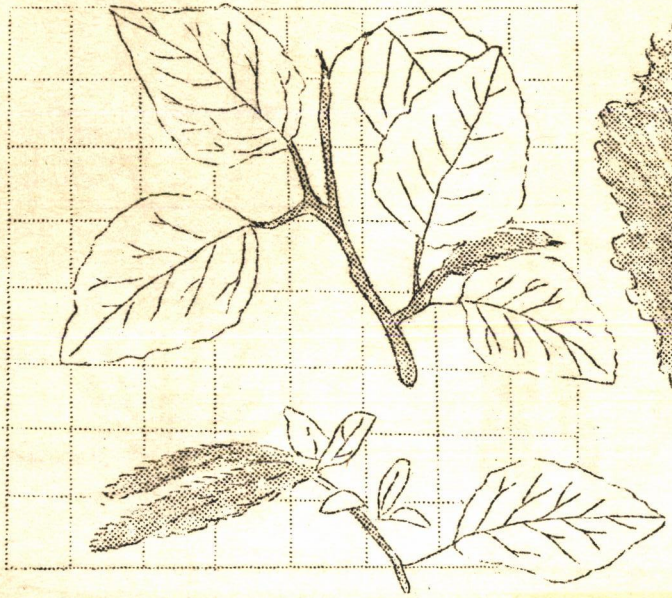
LEAVES: MATURE LEAVES, 1"–2" LONG, ½"–1½" WIDE, BROADLY EGG-SHAPED, MARGIN EVENLY OR DOUBLY TOOTHED, SURFACE SMOOTH ON BOTH SIDES OR BEARING BENEATH A FEW WHITISH HAIRS, DARK GREEN ABOVE, SOMEWHAT PALER BENEATH, LEAF STEM GENERALLY HALF AN INCH OR LESS LONG.

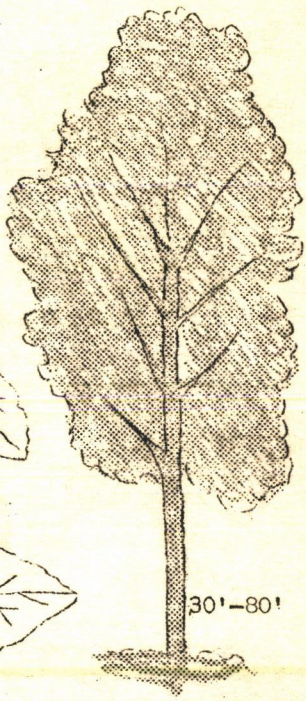
BARK: ON OLDER STEMS IS VERY DARK GRAY OR BROWN, OFTEN DEEP, SHINY, OLD-COPPER COLOR, MERGING INTO LIGHTER AND MORE LUSTROUS SHADES ON THE BRANCHES.

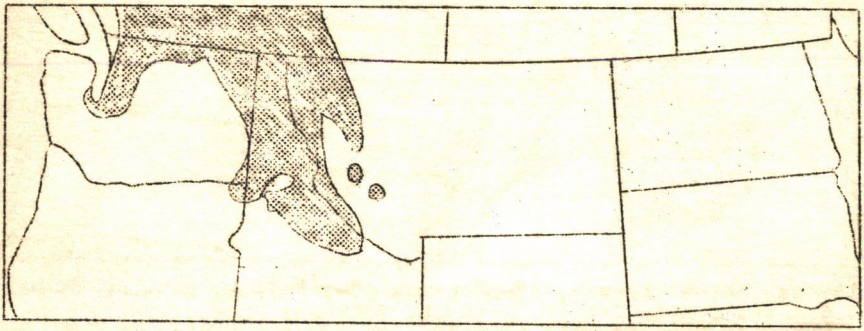
GENERAL CHARACTERISTICS: A SLENDER, GRACEFUL TREE, SOMETIMES A SHRUB. GROWS ALONG STREAM COURSES AND ON MOIST SITES.

Paper Birch

(BETULA PAPYRIFERA)







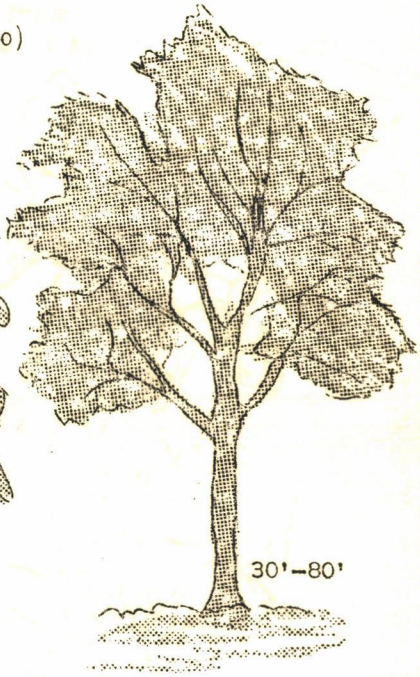
LEAVES: EGG-SHAPED, ACUTE OR TAPER-POINTED, 2"-4" LONG, 1"-2" WIDE, USUALLY ROUNDED AT THE BASE, OFTEN DENSELY TOOTHED ON THE MARGIN, SLIGHTLY HAIRY WHEN YOUNG, USUALLY SMOOTH AT MATURITY EXCEPT FOR FEW LONG HAIRS BENEATH; DARK GREEN ABOVE, PALER BENEATH.

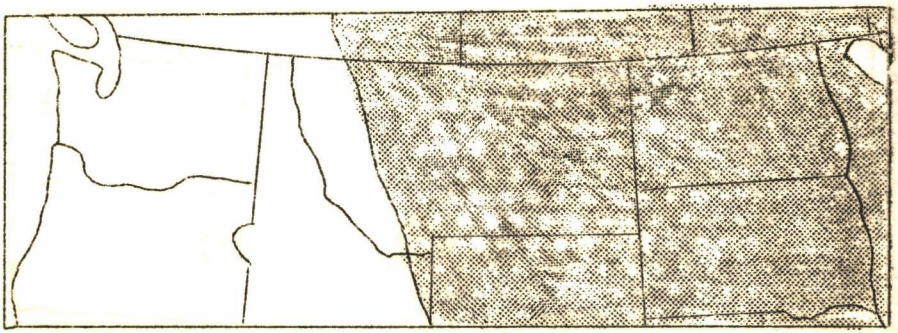
BARK: SMOOTH, BROWN IN YOUNG TREES TO GRAY OR WHITE IN OLD TREES, SEPARATING READILY INTO THIN, PAPERY LAYERS.

GENERAL CHARACTERISTICS: THIS TREE IS OF PECULIAR INTEREST FOR ITS USEFULNESS TO THE INDIANS FOR CANOES AND BASKETS, AND ITS BEAUTY AS A FOREST TREE. THE BEAUTY OF ITS BARK MAKES IT A FAVORITE FOR THE CONSTRUCTION OF RUSTIC FURNITURE FOR SUMMER CAMPS.

Boxelder

(ACER NEGUNDO)



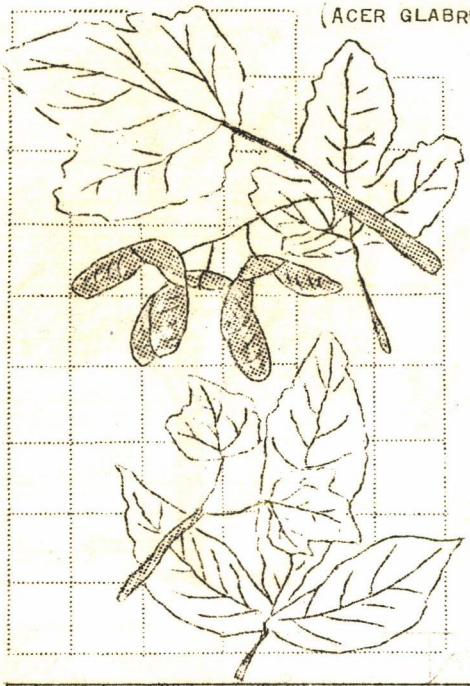


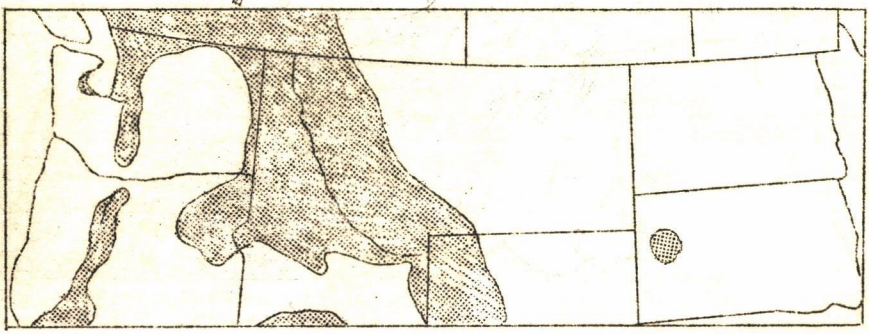
LEAVES: COMPOUND, USUALLY 3, RARELY 5–7 LEAFLETS, WHICH MEASURE 2"–4" LONG, 2" OR MORE BROAD; TIP SHARP WITH A TAPERING POINT, BASE USUALLY WEDGE–SHAPED, COARSELY AND IRREGULARLY TOOTHED ABOVE THE MIDDLE, USUALLY SMOOTH ABOVE, SOMEWHAT HAIRY BENEATH, THIN, LIGHT GREEN, PALER BENEATH.

BARK: GRAY, FIRM, DEEPLY FISSURED, $\frac{1}{2}$" OR LESS IN THICKNESS.

GENERAL CHARACTERISTICS: RATHER WIDELY BRANCHING IN THE OPEN AND WITH A ROUNDED CROWN.

Dwarf Maple
(ACER GLABRUM)



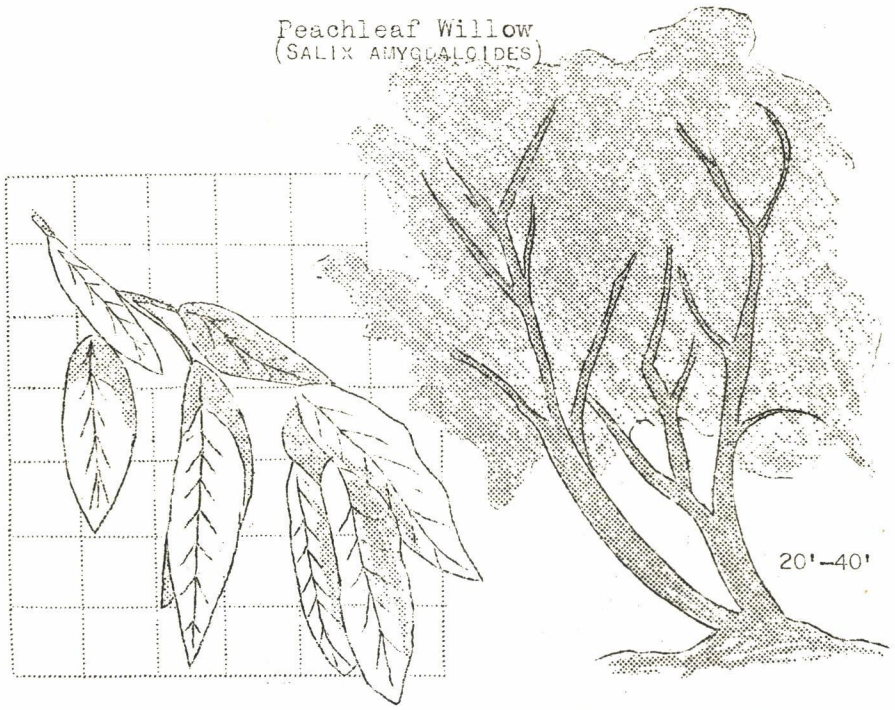


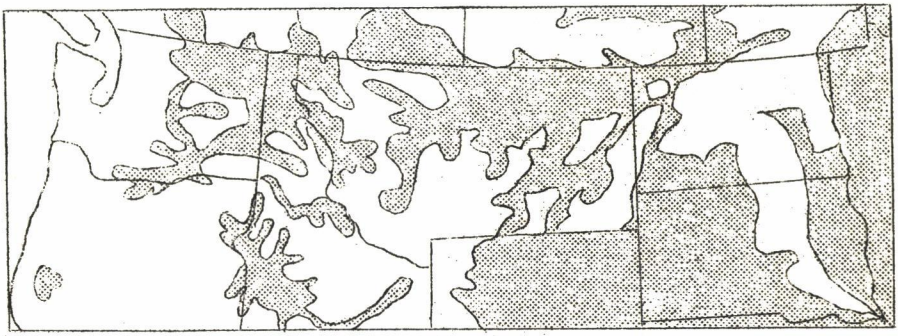
LEAVES: 1"—4" BROAD, ABOUT AS LONG AS BROAD, ROUNDED IN OUTLINE, TIP SHARP, TAPER—POINTED, VARIABLE AT THE BASE, FROM WEDGE—SHAPED TO ROUNDED, CUT INTO THREE SHARP—POINTED LOBES, WITH NUMEROUS, UNEQUAL, SHARP TEETH DIRECTED FORWARD, DARK GREEN ABOVE, PALER BELOW.

BARK: SMOOTH, GRAY ON STEMS AND OLDER BRANCHES, TWIGS SMOOTH, DARK RED.

GENERAL CHARACTERISTICS: A SMALL TREE, OFTEN A SHRUB.

Peachleaf Willow
(SALIX AMYGDALOIDES)



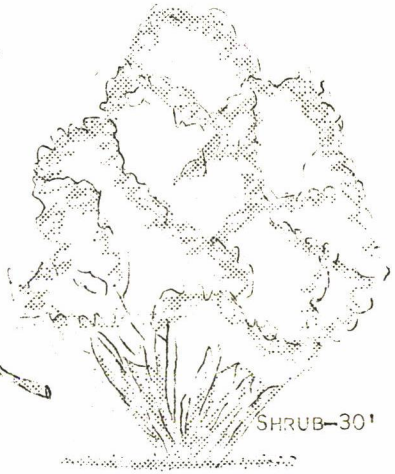


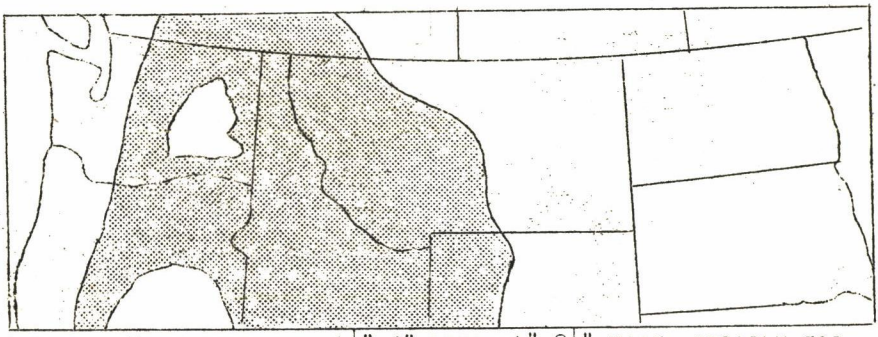
LEAVES: MATURE LEAVES, THIN, SMOOTH, SHINY, AND LIGHT YELLOW-GREEN ABOVE AND PALE OR WHITISH ON UNDER SURFACES. BORDERS HAVE MINUTE TEETH. PROMINENT MIDVEINS RANGE IN COLOR FROM A CONSPICUOUS LIGHT YELLOW TO DARK YELLOW. VARY IN LENGTH FROM ABOUT 2–3/4"–4" AND IN WIDTH FROM 3/4"–1½".

BARK: PALE REDDISH–BROWN, 1/2" THICK, RATHER DEEPLY FURROWED, THE WIDE RIDGES THICK–SCALED AND CONNECTED BY NARROWER LATERAL RIDGES.

GENERAL CHARACTERISTICS: SMALL TREE WITH SHORT TRUNK AND ROUNDED CROWN. GROWS ALONG STREAMS AND OTHER MOIST PLACES.

Thinleaf Alder
(ALNUS TENUIFOLIA)



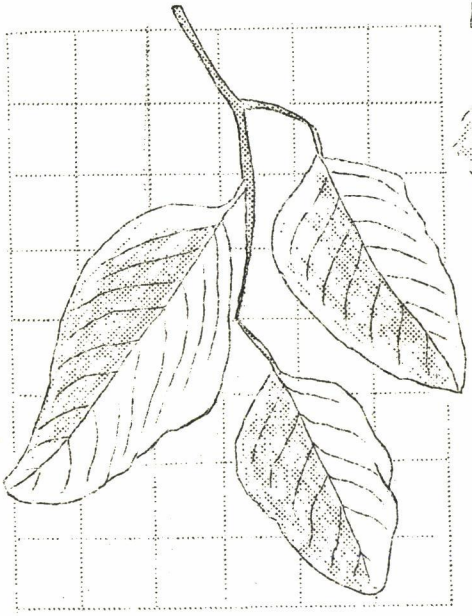


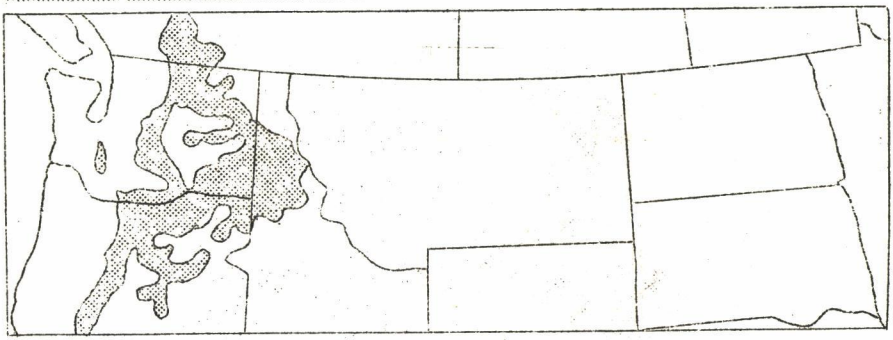
LEAVES: MATURE LEAVES, 1½"—4" LONG, 1"—2½" WIDE; BROADLY EGG-SHAPED; SLIGHTLY HAIRY ON THE UPPER SURFACE, ON THE LOWER SURFACE OFTEN WOOLLY ALONG THE VEINS, BORDERS WITH COARSE TEETH POINTING FORWARD; DEEP GRASS-GREEN ON UPPER SURFACE, LIGHT YELLOWISH-GREEN BENEATH.

BARK: ON LARGER TRUNKS LIGHTLY SEAMED WITH THIN SCALES AND BROWN TINGED WITH RED; ON SMALL TRUNKS, BARK IS SMOOTH, THIN, AND DARK GRAY-BROWN.

GENERAL CHARACTERISTICS: SMALL TREE OR SHRUB, WITH OPEN CROWN AND WIDELY SPREADING AND ASCENDING BRANCHES. GROWS ALONG MOUNTAIN STREAMS, SPRINGY AND BOGGY SLOPES, GULCHES OF HIGH MEADOWS AND LAKES; ABUNDANT WATER IN SOIL ESSENTIAL.

White Alder
(ALNUS RHOMBIFOLIA)



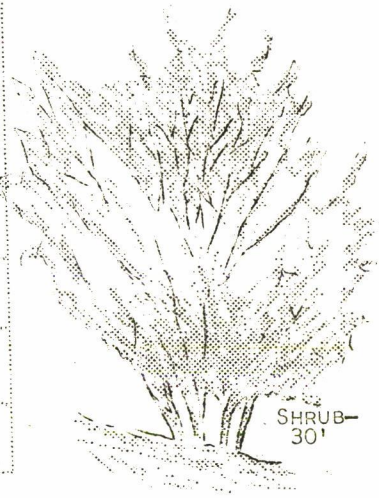


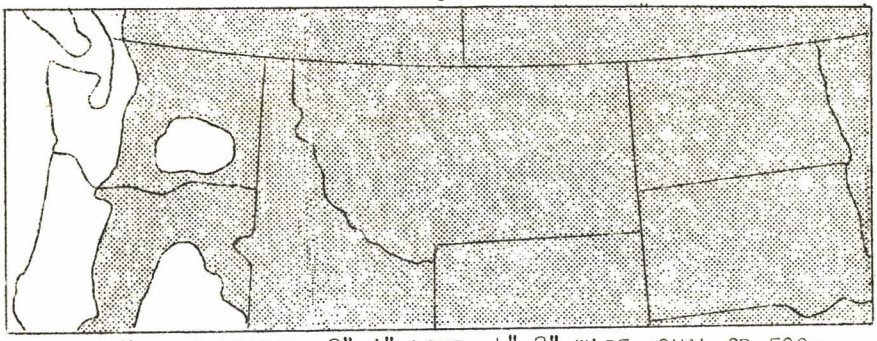
LEAVES: MATURE LEAVES 2"-5" LONG, $1\frac{1}{2}$"-3" WIDE, OVAL, FINE-TOOTHED BORDERS, CURLED A LITTLE TOWARD THE UNDER SURFACE, SMOOTH AND SHINING ON UPPER SURFACE, USUALLY GREEN BENEATH AND BEARING PALE HAIRS ALONG THE YELLOWISH VEIN.

BARK: BROWN, SMOOTH, SCALY ON OLD TREES NEAR THE BASE.

GENERAL CHARACTERISTICS: ONE OF THE LARGEST OF ALDERS, STEMS OFTEN CLEAR OF BRANCHES FOR MORE THAN HALF OF THEIR LENGTH AND EXPANDED ABOVE INTO AN AMPLE ROUND-TOPPED CROWN.

Western Chokecherry
(PRUNUS VIRGINIANA DEMISSA)





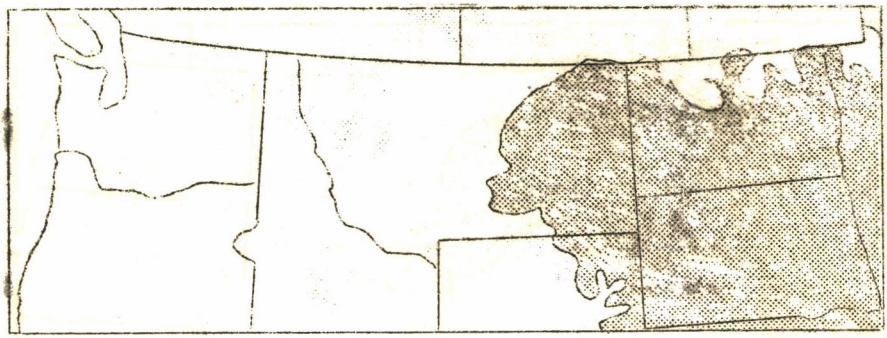
LEAVES: MATURE LEAVES, 2"—4" LONG, 1"—2" WIDE, OVAL OR EGG—SHAPED, SHARP OR ABRUPTLY TAPER—POINTED AT TIP, ROUNDED AT THE BASE, MARGIN FINELY TOOTHED, BOTH SURFACES SMOOTH OR THE LOWER SURFACE BEARING MINUTE HAIRS, THICK, FIRM, DARK GREEN ABOVE, PALER BENEATH.

BARK: THIN, SMOOTH OR SCALY, DARK RED OR BROWN, BITTER TO THE TASTE.

GENERAL CHARACTERISTICS: A SMALL TREE OR MORE COMMONLY A SHRUB. FRUIT PRESERVED FOR FOOD.

American Plum

(PRUNES AMERICANA)

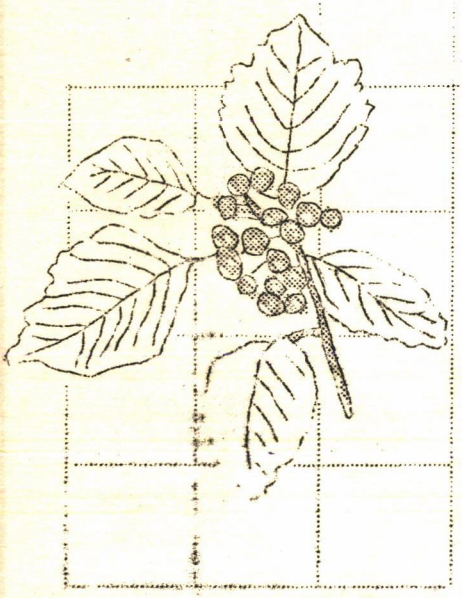


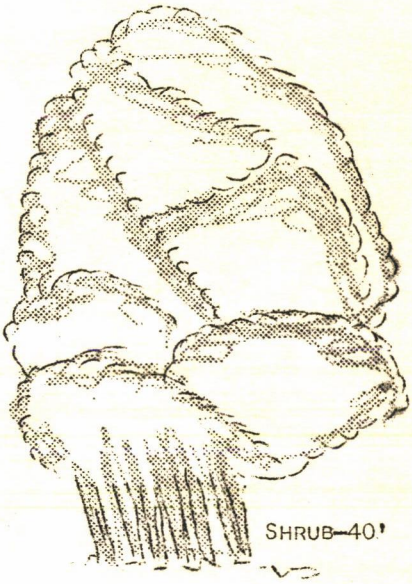
LEAVES: MATURE LEAVES, 2"-4" LONG, 1"-2" WIDE, MOSTLY OVAL, TAPER-POINTED AT TIP, ROUNDED AT BASE; MARGIN, AS A RULE, UNIFORMLY WITH SHARP, FINE TEETH, THICK, FIRM, HAIRLESS, DARK GREEN ABOVE, PALE BENEATH.

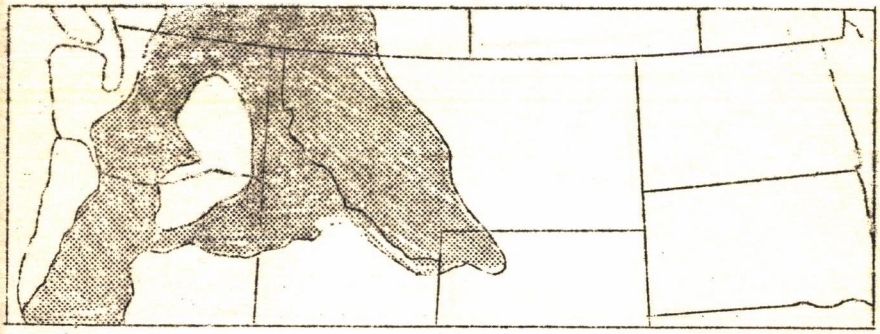
BARK: BROWN TINGED WITH RED, OUTER LAYERS SEPARATING INTO LONG, THIN, PERSISTENT PLATES, ABOUT $\frac{1}{2}$" THICK.

GENERAL CHARACTERISTICS: USUALLY BRANCHING LOW AND SPREADING; BRANCHES OFTEN ARMED WITH STOUT, SPINE-LIKE SPURS. FRUIT COMMONLY USED FOR FOOD.

Western Thornapple
(CRATAEGUS DOUGLASII)







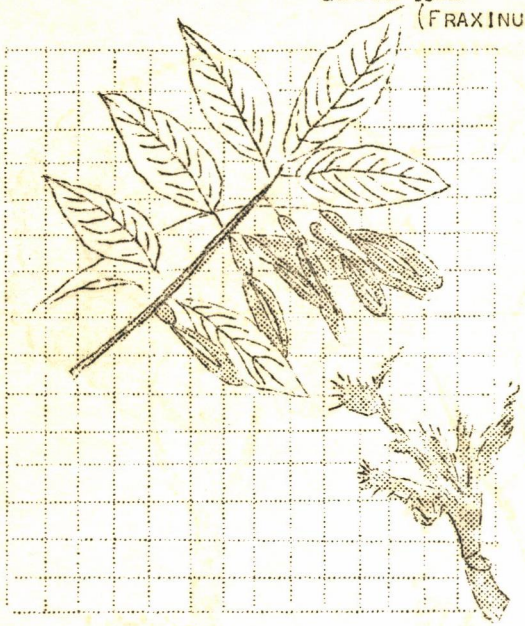
LEAVES: MATURE LEAVES, THICK, SOMEWHAT LEATHERY, 1"-3" LONG, 1"-2" WIDE, EGG-SHAPED IN OUTLINE, ROUNDED OR POINTED AT THE TIPS, WEDGE-SHAPED AT THE BASE, TOOTHED TOWARD THE TIPS, USUALLY SOMEWHAT CUT INTO UNEQUAL LOBES, SMOOTH AT MATURITY, DARK GREEN AND SHINING ABOVE, PALER BENEATH.

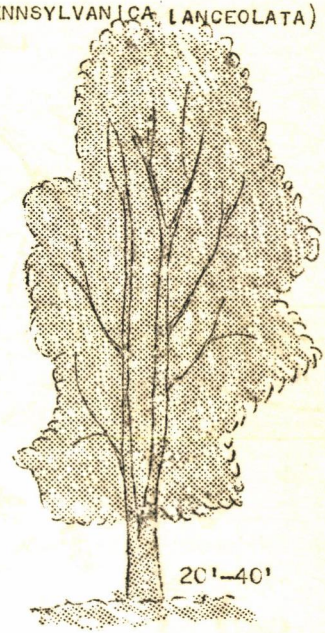
BARK: ON OLDER BRANCHES GRAY, ON YOUNGEST TWIGS SHINY RED TO BROWN, CHANGING TO GRAY.

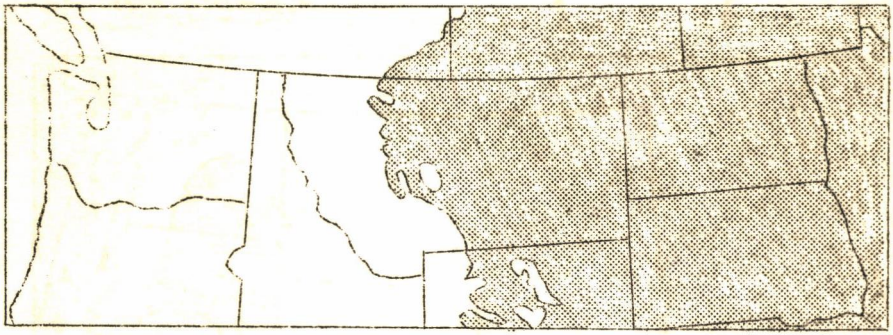
GENERAL CHARACTERISTICS: A TREE UNDER FAVORABLE CONDITIONS, BUT MOST OFTEN A SHRUB. SPINES ½"-1" LONG ARE CHARACTERISTIC. THE BLACK-PURPLE, SHINY FRUIT IS SWEET AND EDIBLE.

Green Ash

(FRAXINUS PENNSYLVANICA LANCEOLATA)

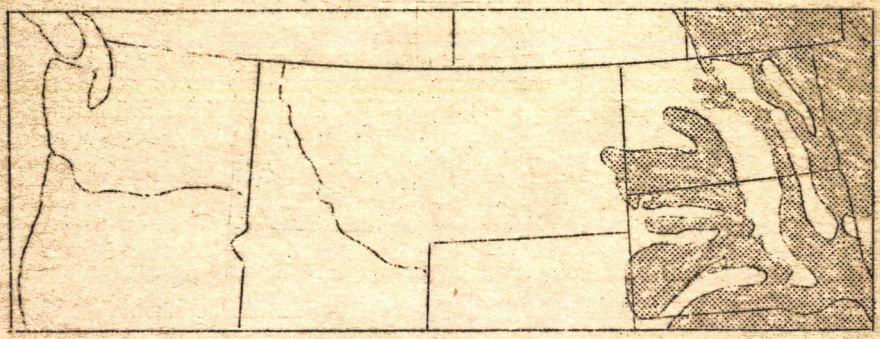






LEAVES: WITH 7-9 LEAFLETS, USUALLY 7; LEAFLETS RATHER NARROW, 2" - 6" LONG, LUSTROUS AND BRIGHT GREEN ON BOTH SURFACES.
BARK: GRAY TO BROWN, TINGED WITH RED, SLIGHTLY FURROWED.
GENERAL CHARACTERISTICS: GREEN ASH ORDINARILY SEEKS THE BANKS OF STREAMS AND BOTTOM LANDS, BUT IT STANDS DROUGHT VERY WELL. IN FORM IT IS ROUND-TOPPED WITH SLENDER SPREADING BRANCHES.

American Elm
(ULMUS AMERICANA)



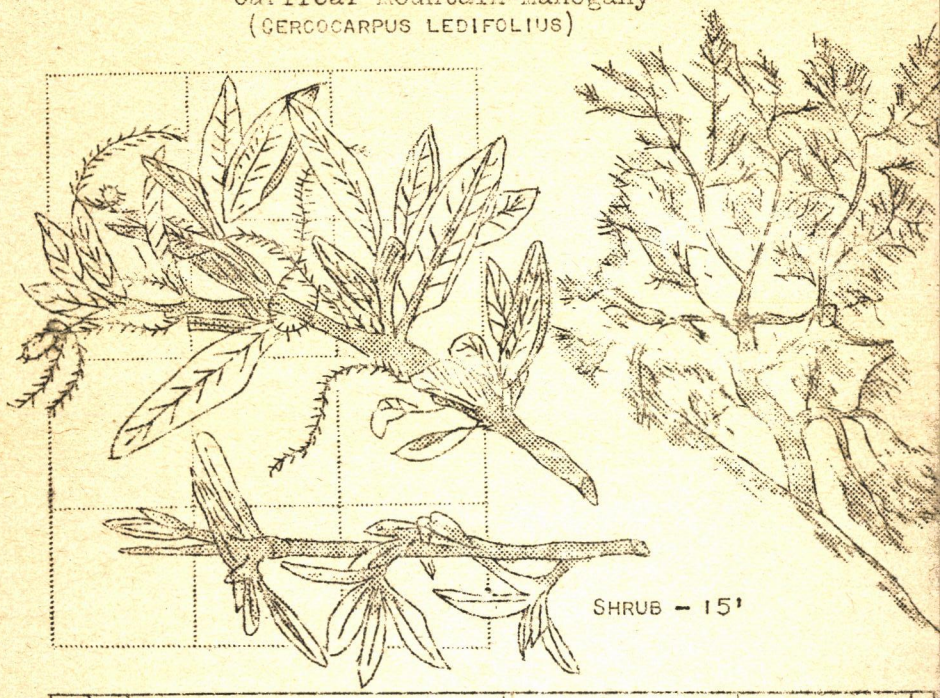
LEAVES: AT MATURITY 4"-6" LONG; 1"-3" WIDE, DARK GREEN AND SMOOTH ABOVE, PALE AND USUALLY WITH A COVERING OF SHORT SOFT HAIRS BELOW, USUALLY TURNING BRIGHT CLEAR YELLOW IN THE FALL.

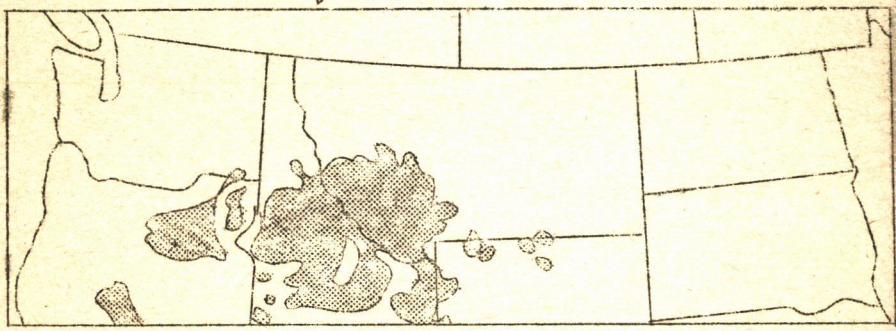
BARK: ASHY GRAY, 1"-1½" THICK, DIVIDED BY DEEP FISSURES INTO BROAD RIDGES.

GENERAL CHARACTERISTICS: MOST COMMONLY GROWS ON MOIST LAND PARTICULARLY ALONG STREAMS. AMERICAN ELM IS A LARGE MAJESTIC TREE IN EASTERN UNITED STATES BUT RATHER SMALL IN ITS LIMITED OCCURRENCE IN OUR REGION.

Curlleaf Mountain-Mahogany

(CERCOCARPUS LEDIFOLIUS)





LEAVES: EVERGREEN, AN INCH LONG OR MORE, 1/8"-1/4" WIDE, ELLIPTICAL, POINTED AT BOTH ENDS, MARGIN ENTIRE, ROLLED TOWARD LOWER SIDE, SMOOTH ABOVE, HAIRY BENEATH.

BARK: HARD, THIN, FLAKY, AND REDDISH-BROWN AND GRAY TINTED.

GENERAL CHARACTERISTICS: A VERY SHORT TREE, OFTEN A SHRUB, WITH TRUNKS SHORT, MORE OR LESS CROOKED; LARGE CRUMPLED LIMBS STAND OUT IRREGULARLY AND WITH NUMEROUS STIFF TWIGS PRODUCE A LOW, DENSE CROWN. WOOD VERY DENSE, FINE GRAINED, AND EXCEEDINGLY HEAVY.

INDEX

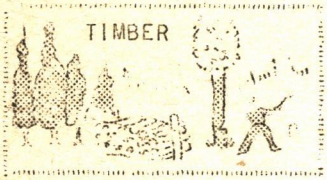
	PAGE
ALDER, THINLEAF	34
ALDER, WHITE	35
ALPINE FIR	16
ALPINE LARCH	10
AMERICAN ELM	40
AMERICAN PLUM	37
ASH, GREEN	39
ASPEN, GOLDEN	23
BALSAM POPLAR	25
BIRCH, PAPER	30
BIRCH, WATER	29
BOXELDER	31
CHOKECHERRY, WESTERN	36
COMMON JUNIPER	19
COTTONWOOD, LANCELEAF	28
COTTONWOOD, NARROWLEAF	27
COTTONWOOD, NORTHERN BLACK	24
COTTONWOOD, PLAINS	26
CURLLEAF MOUNTAIN-MAHOGANY	41
DOUGLAS-FIR	14
DWARF MAPLE	32
ELM, AMERICAN	40
ENGELMANN SPRUCE	11
FIR, ALPINE	16
FIR, DOUGLAS	14
FIR, GRAND	15
GOLDEN ASPEN	23
GRAND FIR	15
GREEN ASH	39
HARDWOODS	21
HEMLOCK, MOUNTAIN	13
HEMLOCK, WESTERN	12
JUNIPER, COMMON	19
JUNIPER, ROCKY MOUNTAIN	18
KEY, HARDWOODS	22
KEY, SOFTWOODS	3
KEYS, USE OF	2
LANCELEAF COTTONWOOD	28
LARCH, ALPINE	10
LARCH, WESTERN	9
LIMBER PINE	6
LODGEPOLE PINE	8
MAPLE, DWARF	32
MOUNTAIN HEMLOCK	13
MOUNTAIN-MAHOGANY, CURLLEAF	41
NARROWLEAF COTTONWOOD	27
NORTHERN BLACK COTTONWOOD	24
PACIFIC YEW	20
PAPER BIRCH	30
PEACHLEAF WILLOW	33
PINE, LIMBER	6
PINE, LODGEPOLE	8
PINE, PONDEROSA	7
PINE, WESTERN WHITE	4
PINE, WHITEBARK	5
PLAINS COTTONWOOD	26
PLUM, AMERICAN	37
PONDEROSA PINE	7
POPLAR, BALSAM	25
REDCEDAR, WESTERN	17
ROCKY MOUNTAIN JUNIPER	18
SOFTWOODS	2
SPRUCE, ENGELMANN	11
THINLEAF ALDER	34
THORNAPPLE, WESTERN	38
WATER BIRCH	29
WESTERN CHOKECHERRY	36
WESTERN HEMLOCK	12
WESTERN LARCH	9
WESTERN REDCEDAR	17
WESTERN THORNAPPLE	38
WESTERN WHITE PINE	4
WHITE ALDER	35
WHITEBARK PINE	5
WILLOW, PEACHLEAF	33
YEW, PACIFIC	20

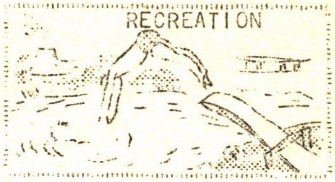
ACKNOWLEDGMENTS

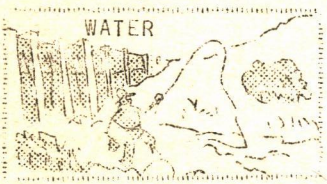
THE MATERIAL FOR THIS BOOKLET WAS COMPILED BY C. A. WELLNER, ASSISTANT SILVICULTURIST IN THE NORTHERN ROCKY MOUNTAIN FOREST AND RANGE EXPERIMENT STATION OF THE FOREST SERVICE. THE ILLUSTRATIONS WERE DRAWN BY W. E. DEEMER OF THE ENGINEERING DIVISION OF THE FOREST SERVICE AT MISSOULA. THE FOLLOWING PUBLICATIONS HAVE BEEN FREELY CONSULTED: "MANUAL OF THE TREES OF NORTH AMERICA" BY C. S. SARGENT; "FOREST TREES OF THE PACIFIC SLOPE" BY G. B. SUDWORTH; "CHECK LIST OF THE FOREST TREES OF THE UNITED STATES, THEIR NAMES AND RANGES" BY G. B. SUDWORTH; "POPLARS, PRINCIPAL TREE WILLOWS AND WALNUTS OF THE ROCKY MOUNTAIN REGION" BY G. B. SUDWORTH; "NORTHERN ROCKY MOUNTAIN TREES AND SHRUBS" BY J. W. KIRKWOOD; "A POCKET GUIDE TO THE TREES AND SHRUBS OF BRITISH COLUMBIA" BY B. G. GRIFFITH; "SHORT KEYS TO THE NATIVE TREES OF OREGON AND WASHINGTON" BY H. WINKENWERDER AND F. F. WANGAARD; AND "FOREST TREES OF THE PACIFIC COAST BY W. A. ELIOT.

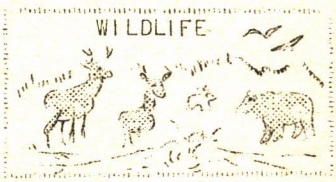
Fire IS THE FOREST ENEMY!

NATIONAL FORESTS YOUR FORESTS FURNISH



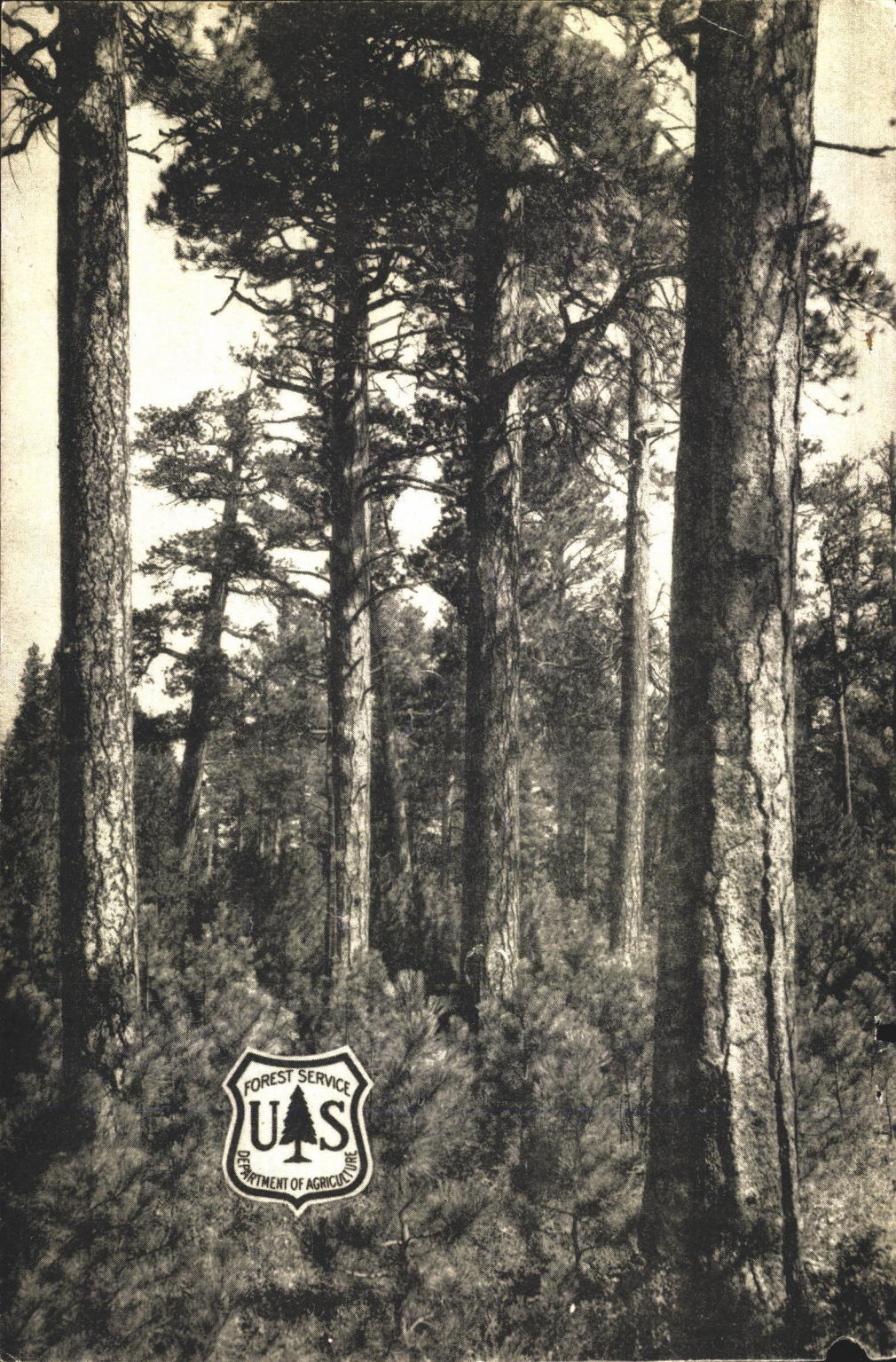






PROTECT THESE FROM FIRE

USE CARE with MATCHES CAMPFIRES SMOKES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